ALL HANDS

GENERAL INFORMATION

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ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

NOVEMBER 1957 Nav-Pers-O NUMBER 490

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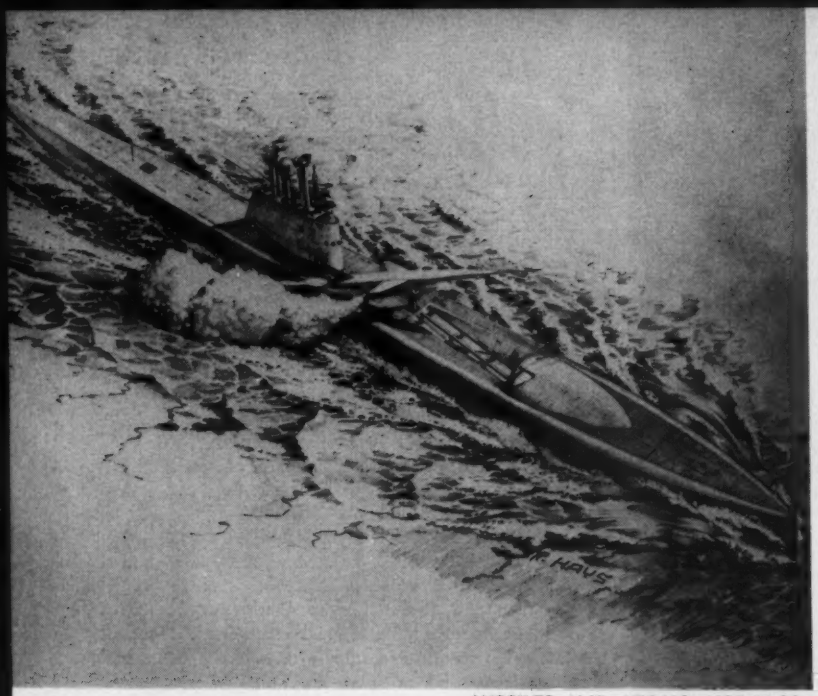
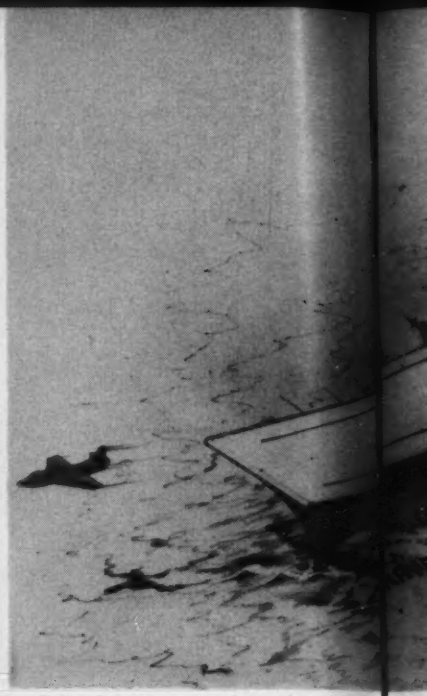
• **FRONT COVER: NOSE DIFFERENCE**—Bow-on view of atomic sub *USS Nautilus* and *USS Greenling*, (SS 213), a conventional World War II Fleet-type submarine, points up the difference in underwater ships. Photo by John J. Krawczyk, FTC, USN.

• **AT LEFT: SCOPE OF IT**—Skyline of New York City is shown here as it was photographed through the periscope of nuclear-powered submarine, *USS Nautilus*, SS(N) 571, from about two miles out in the New York harbor.

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.





MISSILES AND ATOMS—*USS Halibut*, will be first A-powered missile sub.

WHAT'S NEXT

THIS IS THE STORY of our new nuclear Navy.

It's a nuclear Navy that's fantastic and unique, far different from anything that has ever sailed the seven seas. It's here today, and every Navyman is a part of it.

Although most of us have been charter members of this nuclear Navy since its birth, very few Navymen have had the opportunity to get a firsthand look at it.

But just suppose you were one of those Navymen who has had a chance to get a close look at the atomic Fleet.

In USS *Nautilus*, SS(N) 571, the world's first atomic submarine, you've traveled at speeds and witnessed underwater feats which are still wrapped up in security. Again in USS *Seawolf*, SS(N) 575, you've seen how another type of atomic propulsion plant operates.

You've made an extensive tour of *Skate*, SS(N) 578 — our third nuclear submarine — while her construction was nearing completion, and visited other A-subs in the building ways.

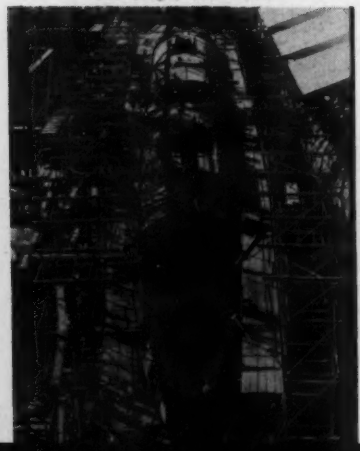
Going aboard the full-scale wooden mock-ups of *Skipjack*, SS(N) 585, the first in a series of new, fast attack atomic submarines, and *Triton*, SSR(N) 586, the largest submarine ever built, you've seen a preview of what's in store for tomorrow. Also, you've been lucky enough to visit the Atomic Energy Commission's National Reactor Testing Station at Arco, Idaho, to see what's going on at the Naval Reactor Facility there.

On top of all this, you've had the opportunity to meet some of the men who'll be sailing our underwater nuclear Fleet, as well as those who'll operate the nuclear reactors in *Long*

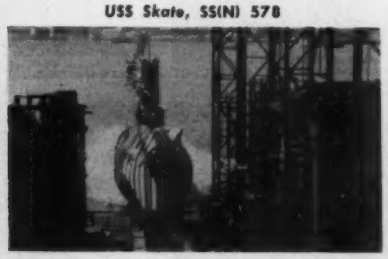
USS *Seawolf*, SS(N) 575

USS *Long Beach*, CG(N) 9

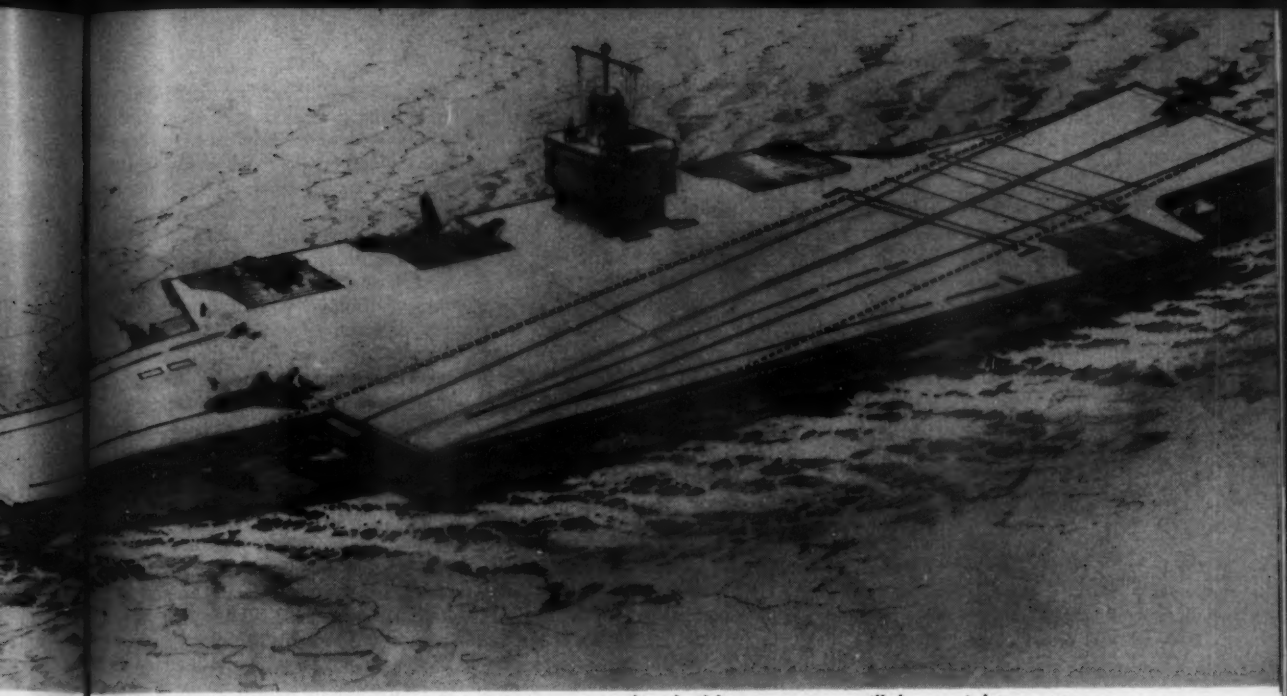
USS *Sargo*, SS(N) 583



USS *Skate*, SS(N) 578



USS *Nautilus*, SS(N) 571



A-POWER TO BURN—Atomic aircraft carrier in current ship building program will have eight reactors.

EXIN THE NUCLEAR FLEET?

Beach, CG(N) 9, and the still unnamed CVA(N) 65, recently authorized 85,000-ton nuclear aircraft carrier. (This report is based on just such an on-the-scene tour of the atomic Fleet in the making by the writer.—ED.)

The story of the nuclear Navy does not have to go very far back to its beginning. Back in April 1948, the Chief of the Bureau of Ships (Vice Admiral E. W. Mills, USN) addressed the Underseas Warfare Conference in Washington and summarized the Navy's efforts up to that date to obtain action on the development of a nuclear power plant.

You might say that conference really marked the start of our nuclear Navy. Shortly thereafter, the Atomic Energy Commission established the Submarine Thermal Reactor (STR) project for the development, engineering design, construction and operation of the STR Mark I. Rear Admiral H. G. Rickover (then Captain), USN, was assigned to the Atomic Energy Commission to head this project. This was to be a prototype of the reactor for the world's first atomic-powered ship — the formal beginning — and it was just nine years ago.

An increasing number of Navymen are getting in on the ground floor in the nuclear Navy. You may be the next. You don't have to be a mathematical genius or an electronics engineer either. Gary A. Johnson, ICFN, USN, is just 19 years old, yet he has been to the Naval Reactor Facility at Arco, Idaho, and has completed nuclear training there. A remark he made is typical of the enthusiastic attitude of the Navymen working in this new field.

"Just think! Little ole me, getting in at the beginning on a project as big as this. They've already authorized 21 nuclear ships. What will we have to work with 10 years from now?"

The answer to that question is back in Washington, in the office of Admiral Arleigh A. Burke, USN, Chief of Naval Operations. Near his desk he keeps a large flat book containing the Navy's two master plans for our Fleet of today and tomorrow. One, which is revised each year, covers firm shipbuilding plans for the next several years. The other is long range. It copes with the question: "Where is the Navy going?" and looks much further into the future.

This book contains the blueprints and timetable for the greatest planned naval revolution in history. And it's one that will be carried out in an almost unbelievably short time. Most people would consider these plans "impossible" as they call for

USS Swordfish, SS(N) 579

USS Triton, SSR(N) 586

USS Skipjack, SS(N) 585

the conversion of most of our combatant Fleet from oil to nuclear power in the short span of less than 20 years.

Admiral Burke, however, likes to point out that it took 400 years for navies to shift from spears to gunpowder, 75 years from sail to steam, but less than 12 years from the unlocking of the atom to nuclear power.

Just one of these nuclear task forces will be only a fraction of the size of those commanded by Admirals Halsey or Spruance in World War II. But in terms of weapons and striking power, the task force of tomorrow will be many times greater than even those of today.

All this sounds incredible—for today these mighty nuclear task forces are only on paper. They do, however, answer that question about our nuclear Navy of tomorrow. But, what about today?

Our nuclear Navy today—in operation, being built or already authorized—consists of 19 submarines, one cruiser and one carrier. In addition, the Navy and the AEC are at work developing a destroyer-size nuclear propulsion plant.

The only operational units of our nuclear Navy today are *Nautilus* and *Seawolf*. The third, *Skate*, the first of a new class of attack submarines, was launched in May of this year and should soon join the Fleet.

Types of Atomic Submarines

Our family of atomic submarines today consists of several different types. Here's a brief run down on them:

• **USS *Nautilus*, SS(N) 571**—Often referred to as the "Model T" of the Navy's atomic underseas Fleet, *Nautilus* has performed beyond all expectations. The story of her spectacular successes is well known. *Nautilus* is unbelievable. However, one must see for himself to realize what a revolutionary weapon she actually is.

Thanks to her unique power plant, *Nautilus* does not have to surface to recharge batteries and needs to refuel only at infrequent intervals. She's a "true" submarine — the world's first — and can cruise submerged at will.

Since first getting "Underway on Nuclear Power," at 1100, 17 Jan 1955, SS(N) 571 has been at sea more than 7000 hours. During that time, she has steamed more than 85,000 miles. Of this, more than 53,000 were submerged.

Nautilus operated for 26 months and steamed more than 62,500 miles before being refueled. If she had been diesel-powered, she would have needed enough oil to fill a train of tank cars one and one-half miles long. Her first uranium core was equivalent to over 2 million gallons of fuel oil—enough to fill 217 railroad tank cars.

She is now cruising on her second core which is said to be "a significant advance" and even more efficient than her first.

Our pioneer A-sub is about 320 feet long, has a beam of 28 feet, and a surface displacement of over 3100 tons. Equipped with the most modern submarine armament and electronic equipment developed to date, *Nautilus* is manned by a crew of 13 officers and about 95 enlisted men. That's about 10 more than her normal complement as she usually carriers additional personnel for training puposes.

Because a nuclear reactor requires no oxygen for its operation—as a combustion engine does—*Nautilus* is able to operate at top efficiency for long periods while submerged. She's capable of operating at full speed all the time. The submerged speed of a conventional World War II sub was two or three knots under ordinary conditons, and only as much as eight or nine knots for a full hour. (A conventional steam plant in a surface ship rarely ever ran more than 12 hours consecutively at full speed even in wartime.)

Nautilus has cruised submerged from Key West to New London, a distance of 1200 miles at an average speed of over 20 knots. Her longest

TOUCH OF TOMORROW—A-powered missile cruiser, *USS Long Beach*, shown in drawing will be first surface A-ship.

submerged run was 3032 miles, from Panama to San Diego. During that run, *Nautilus*' speed of advance was 19.1 knots.

The high operating capabilities of *Nautilus* were not obtained by sacrificing the welfare of her crew. In fact, her living conditions are excellent—far better than you would imagine.

Her interior was designed for the comfort of her crew. Special eye-resting color schemes and adequate air conditioning help make it pleasant and habitable. It features individual lights and ventilation louvres for each bunk.

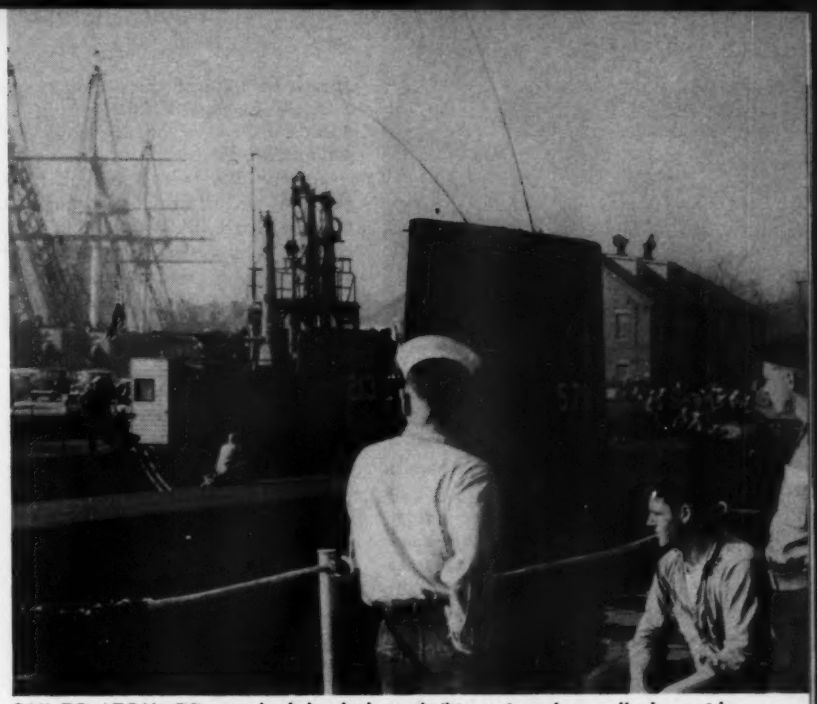
To keep long submerged cruises from becoming monotonous, many other "unheard of" conveniences were added. (During one cruise, *Nautilus* stayed submerged for more than 14 days.) They include a permanently mounted movie screen to show both conventional and wide-screen movies, a 100-play juke box, coke machine, tape recorder and a record player that will play records of all sizes and speeds.

She's also equipped with a 21-inch TV set in the crew's mess which can be viewed while submerged so long as the sub's radio antennas are exposed; automatic washing machines, radio, fluorescent lighting in every compartment, a photo lab, electric hand dryers; an icebox which is always open and well stocked for between meal snacks, ice cream machines, and such taken-for-granted items as a library, hobby crafts and games.

Her skipper is Commander William R. Anderson, USN, who relieved Captain Eugene P. Wilkinson, USN, earlier this year.

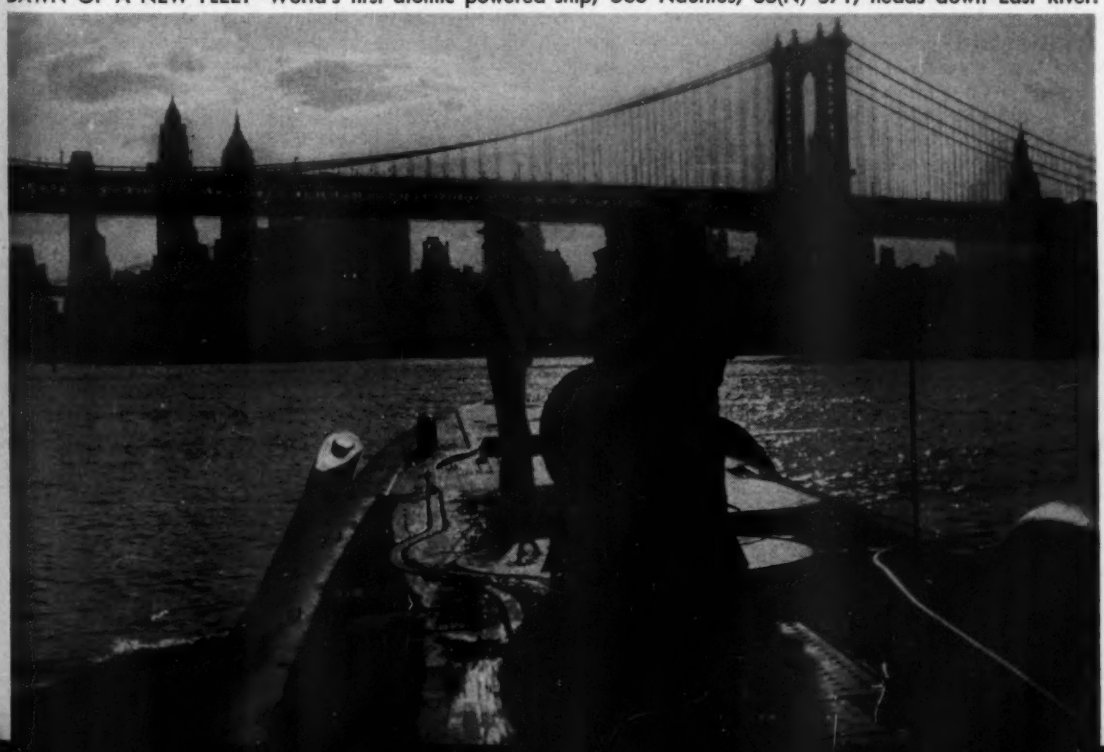
Performance-wise, *Nautilus* is most celebrated for her endurance. However, her most significant aspect is her reliability.

In every respect, she has operated exceptionally well and has surpassed all expectations. In maneuvers or



SAIL TO ATOM—DD men look back through 'history' as they pull along side *USS Nautilus* moored by WW II type sub with masts of *Constitution* in rear.

DAWN OF A NEW FLEET—World's first atomic powered ship, *USS Nautilus*, SS(N) 571, heads down East River.



NUCLEAR RESEARCH—Navy scientists experiment with A-fuel at Naval Lab.

actual Fleet operations, it's the same story. *Nautilus* has proved so great, that she's forcing Navy tacticians to rewrite the books. And remember, she's only the "Model T." What will her successors have to offer?

• **USS Seawolf, SS(N) 575** — Although not so highly publicized as *Nautilus*, our second nuclear-powered submarine is equally as potent. With the exception of her reactor and its auxiliary systems, *Seawolf's* propulsion plant is generally similar to that of *Nautilus*. In other characteristics, length, beam and surface displacement—*Seawolf* is somewhat larger. She's about 330 feet, 27 feet and over 3200 tons respectively.

Seawolf's reactor is cooled by liquid sodium instead of high pressure water as in *Nautilus*. When plant designs for our first two A-subs were first considered, sodium appeared to offer several advantages over water as a reactor coolant. Construction of the two plants was undertaken simultaneously because the need to develop a nuclear-powered submarine was great and it was not known then that either type of plant would work.

During dockside tests—even before *Seawolf* put to sea—a failure occurred in the steam superheater and steam leaks appeared in the piping connected to the superheater of the steam generating system.

These troubles, however, were not in the reactor. Although they were not corrected permanently, *Seawolf* was put into operation after the superheaters were bypassed. She finally put to sea in January 1957. With these piping modifications, she's limited to 80 per cent of her designed horsepower rating and 90 per cent of her designed maximum speed. In spite of these limitations, *Seawolf* is capable of cruising at speeds in excess of 20 knots for unlimited periods.

Seawolf has been operational for the past six months. According to CDR Richard B. Laning, USN, *Seawolf's* commanding officer, our second atomic sub has cruised more than 20,000 miles without having any engineering difficulties. Since being commissioned on 30 Mar 1957, she has been at sea two out of every three days. To date, *Seawolf* has traveled more than 14,000 miles submerged.

Since *Seawolf* is capable of cruising for long periods without surfacing, extreme care was also taken in her interior design and planning. Her machinery and control stations have been arranged so that the crew can operate at peak efficiency at all times. Placement of wheels, gauges and lights have been worked out to minimize fatigue in accomplishing shipboard assignments.

There is about as much space for the comfort and convenience of the crew in our second atomic submarine as you would find in a destroyer or similar type surface ship.

Seawolf's nuclear reactor produces power for her "housekeeping" equipment as well as for her propulsion and armament. The electricity-producing potential of her power plant —which contribute to the well-being of *Seawolf's* 103-man crew (10 officers and 93 enlisted men)—could be harnessed to supply similar domestic needs for a city of about 32,000 people.

Seawolf has operated against *Nautilus*, as well as other underseas and surface units during ASW exercises. She recently participated in NATO's Operation *Strikeback*.

• **USS Skate, SS(N) 578**—She's the first of four nuclear attack submarines which have been designed after the advanced conventional fast attack submarines of the *Tang* class. Built at Groton, Conn., *Skate* is scheduled to join the Fleet soon.

According to CDR James F. Calvert, USN, *Skate's* CO, the SS(N) 578 is the Navy's first "production" model of our nuclear underseas Fleet. *Skate's* design stresses "simplification and refinement." She is the first of our nuclear submarines built to date which did not have its power plant tested in a land-based prototype reactor.

Skate is also the first submarine to be designed as a result of experience gained from *Nautilus*. Her atomic engine will drive the medium-size submarine at great speeds on and under the surface.

Similar to *Nautilus* and *Seawolf*, *Skate* will be able to operate submerged for long periods of time, a great advantage in both offense and defense.

Skate is about 25 per cent smaller than our first two A-boats. She's only about 265 feet long. Her crew consists of eight officers and 75 enlisted men — many of whom served in *Nautilus* and *Seawolf*.

In additon to *Skate*, three other nuclear Fleet-type subs have been authorized. **Swordfish, SS(N) 579,** and **Sargo, SS(N) 583,** have been launched, and **Seadragon, SS(N) 584,** is being built.

A fifth atomic submarine, **Halibut, SSG(N) 587,** the U. S. Navy's first nuclear sub to be designed and built as a guided missile launcher, will also incorporate the same type reactor as *Skate*. *Halibut* is being built at the Mare Island (Calif.) Shipyard.

• **USS Triton, SSR(N) 586**—This is the largest submarine ever built and is the first to be powered by two nuclear reactors. During World War II, both France and Japan had large subs but *Triton* will be even larger than these.

Displacing 5450 tons, our first nuclear radar picket sub is bigger than our largest destroyer-type vessel and almost as big as our antiaircraft light cruisers of World War II vintage.

Nautilus and *Seawolf* — in size, living conditions and capabilities— are no comparison whatsoever to our conventional submarines. As big and as advanced as they are, however, they too are dwarfed and cannot be compared with *Triton*. A visit to *Triton* makes one think that he's in a dream ship of the future.

She is designed to be fast enough to operate in advance of our fast carrier task forces and to provide them with radar information. She'll have the radar picket capabilities of a high-speed submersible DER.

• **Skipjack, SS(N) 585** — As unbelievable as *Triton*, *Skate*, *Nautilus* and *Seawolf* may be, here's the Navy's most amazing ship in its entire nuclear Fleet. The first of a series of seven high-speed attack submarines, *Skipjack* represents a marriage of the tear-drop hull with

a nuclear engine. With these two outstanding features united, SS(N) 585 and her sister ships will actually "fly" underwater as an airplane flies through the air. She'll be capable of out-maneuvering the fastest destroyer or surface ship afloat and will be able to cruise submerged at speeds even greater than *Nautilus*.

Every projection on *Skipjack* has been eliminated except for her thin, dorsal-fin-like conning tower. Her round hull has a minimum of flat deck surface and her diving planes are built into the conning tower instead of the hull.

Skipjack's top speeds will be achieved by means of a single, five-bladed propeller. All other classes of the new nuclear boats, as well as all conventional submarines (except USS *Albacore*, AGSS 569) are driven by twin screws. *Skipjack's* single screw and hull are about the same design as those used in *Albacore*, the experimental high-speed diesel-battery-driven submarine, which was built solely for testing an advanced hydrodynamic design.

Although *Albacore's* actual speed has not been released, it has been said that owing to her tear-drop or whale-like design, she's the fastest conventional submarine ever built.

Skipjack is rapidly taking shape next to *Triton* at Groton, Conn. She's scheduled to join the Fleet within the next two years. Five additional high-speed single-screw nuclear-powered attack submarines are being built at Pascagoula, Miss., Newport News, Va., Portsmouth, N. H., and Mare Island, Calif. They include: ***Scamp*, SS(N) 558; *Scorpion*, SS(N) 589; *Sculpin*, SS(N) 590; *Shark*, SS(N) 591;** and ***Snook*, SS(N) 592.** A sixth high-speed fast attack nuclear sub, SS(N) 593, still unnamed, has been authorized, but her construction is being delayed to permit further refinements in her hull design and engineering plant.

These radically new atomic submarines will feature S5W reactors. The S5W reactor plant will be almost the same size as the reactor in *Nautilus*, but there the resemblance ends.

These ships are the units of our nuclear Navy. They are new, radically new. When they are put to sea, they will mark a new era in underseas warfare. In the past we have been attempting to fight a 3-D war with 2-D forces. Now things are different.

Nuclear Surface Ships

Up to this point, we've been dealing with the underseas arm of our nuclear Navy, but from all indications the surface units will be equally as great—or greater. Here's the current picture:

• ***CVA(N) 65***—This 85,000-ton nuclear-powered aircraft carrier authorized in the Navy's '58 Shipbuilding Program has been described as "the most exciting ship on the future horizon of our Navy." She will be the largest warship ever built.

With eight nuclear reactors of the pressurized water type, the gigantic carrier will be capable of cruising at high speeds. Her cruising range will equal many non-stop trips around the world without refueling.

Our first atomic carrier will take the "super" out of the 60,000-ton *Forrestal* class of supercarriers. Having no bunker oil needs, the atomic carrier will be capable of carrying a much greater amount of supplies and aviation fuel than *Forrestal*, thereby increasing the time it can conduct air operations before taking on aviation gas. In addition to the extra storage space, she'll have more flight deck and added hangar deck space.

Because of its nuclear power plant, the need for uptakes and stacks is eliminated and the island or superstructure arrangements can be more flexible.

• ***Long Beach*, CG(N) 9**—This will be the first nuclear-powered surface ship. With her keel scheduled to be laid at Quincy, Mass., in early 1958, the 700-foot, 14,000-ton guided missile cruiser is expected to join the Fleet by 1961. This ship is as revolutionary for her type as the new mobile airbase is for her type.

Conventional guns will be relegated to the past. All the major armament on *Long Beach* will be missiles, and will include both surface-to-air defensive varieties and surface-to-surface offensive types.

Her pressurized-water-type reactor plant will be approximately one-fourth the size of that used in the nuclear-powered aircraft carrier. She's estimated to cruise at over 30 knots.

The nucleus of *Long Beach's* crew has been training at Arco for the past year.

One of the salient advantages of this nuclear-powered guided missile cruiser will be a cruising range far greater than that of existing Fleet escort ships. She will feature excellent sea-keeping ability and with her newly developed guided missiles she'll provide maximum protection for Navy task forces against attack from air, surface or undersea weapons.

It is in the destroyer type ship, "the workhorse of the Navy," that nuclear power is most needed. No other fighting ship gains more in cruising range and operational flexibility from use of nuclear power than does the destroyer.

Instead of having destroyer operations limited by refueling at sea every few days, a nuclear destroyer can stay on the job.

Development of a destroyer nuclear propulsion plant is being pushed by the Navy and the Atomic Energy Commission. This development is going so well that the Navy hopes to include an atomic frigate in next year's shipbuilding program.

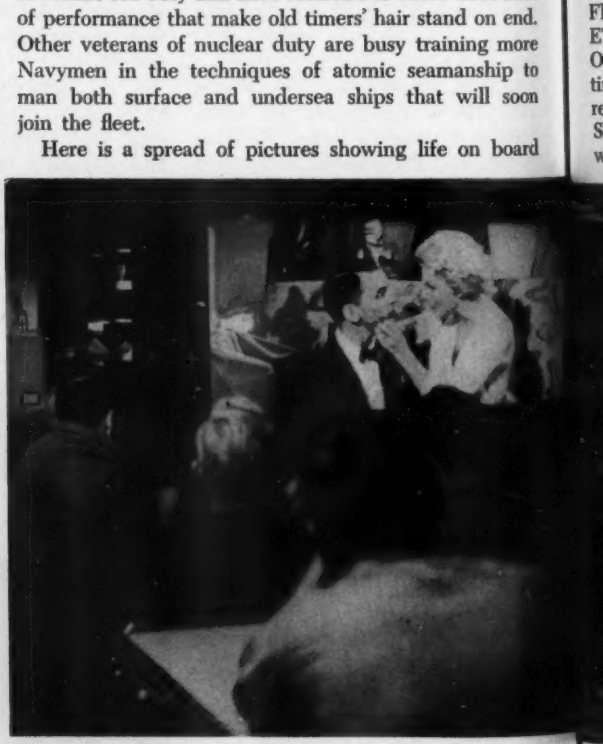
—H. George Baker, JOC, USN.

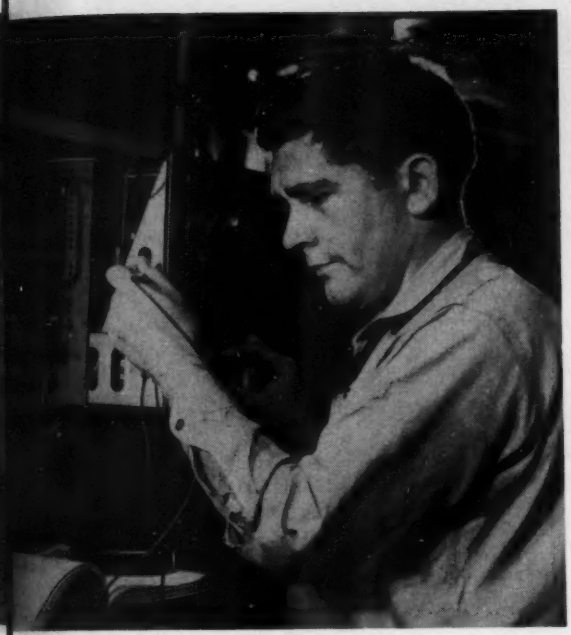
NUCLEAR SALTS—Control room of *USS Seawolf*, SS(N) 575, is manned by atom sailors. Navymen now study atomic power at Navy's Nuclear Schools.

These Men Sail Ou

THE WORLD'S FIRST nuclear propulsion sailors are now manning the first atomic submarines *USS Seawolf*, SS(N) 575, and *USS Nautilus*, SS(N) 571. In addition, many Navymen have already completed their first tour of atomic sea duty and have returned to shore with tales of performance that make old timers' hair stand on end. Other veterans of nuclear duty are busy training more Navymen in the techniques of atomic seamanship to man both surface and undersea ships that will soon join the fleet.

Here is a spread of pictures showing life on board

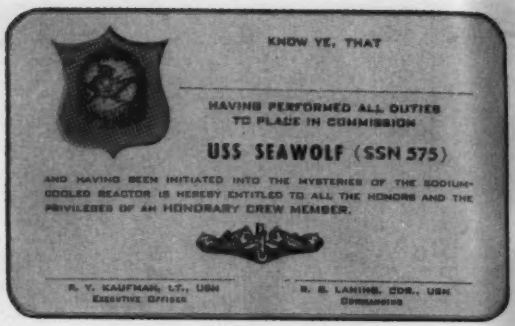




Our First Atomic Ships

two operational sea-going units in the U.S. Navy's rapidly growing nuclear-powered Fleet.

Clockwise from top left: Atomic sailors man the controls of Navy's pioneer in nuclear propulsion, *USS Nautilus*. Yeoman Joe Aycock checks records on board Fleet's second A-sub, *USS Seawolf*. J. A. Carrie, ET2(SS) repairs electronic gear on *Nautilus*. LT Charles Orem scans with *Seawolf's* scope. *Nautilus* sailors take time from nuclear duty; G. W. Fields, TMCA(SS), reads while J. J. Owens, SD1, watches TV. C. T. Shaffer, SO1(SS) listen to music. Crew members watch movie while others take fantail swim.



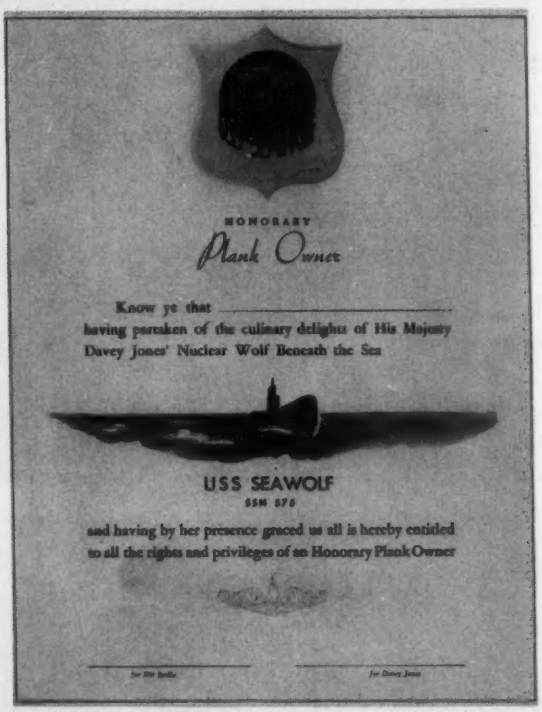
Atomic Submariners

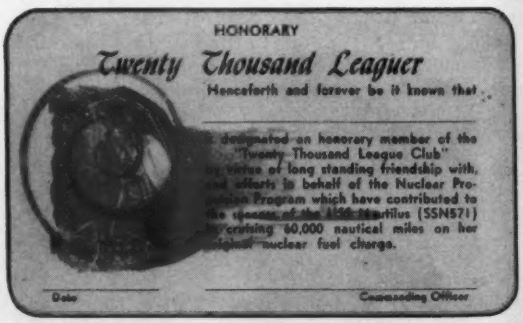
IF YOU'RE NOT assigned to the "Silent Service" but are fortunate enough to make a cruise aboard a submarine you're usually designated an "Honorary Submariner" by the commanding officer of the SS you visit. To go along with this title, individuals so honored are usually presented a colorful wallet-size certificate to prove that they have submerged in a sub.

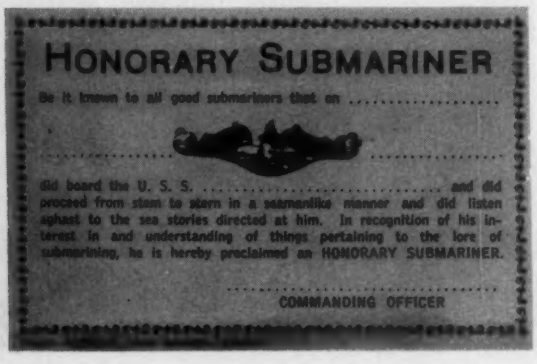
Our nuclear subs are no exception. However, they go all-out in comparison to most conventional submarines. Instead of designating their visitors as just honorary submariners, USS *Nautilus*, SS(N) 571, proclaims them as "Atomic Submariner Extraordinary in the Order of the Nuclear Navy" or else "Twenty Thousand Leaguers."

USS *Seawolf*, SS(N) 575, our newest atomic submarine, bestows on its guests the title and privileges of an honorary crew member for "having been initiated into the mysteries of the sodium-cooled reactor."

In additon to the certificates presented to visitors, *Nautilus* and *Seawolf* do not fail to give proper recognition to their own crews. They present them with large Neutron Owner's Certificates and Deep Dive Diplomas.







RUDDER and engines are manned by Bob Wakefield, QM2. *Rt.* Tug and target.

Here's a Crew That Goes for Tugs

NUCLEAR submarines . . . supersonic aircraft . . . giant aircraft carriers that dwarf other ships on the Seven Seas are ready conversational material for every Navyman in this atomic age, often at the expense of the Fleet of service force ships that continue to do their job of supporting the combat forces.

One member of this force of sometimes forgotten ships, is the auxiliary ocean tug USS *Sunnadin* (ATA 197). Her power plant is a conventional diesel electric unit (not a nuclear reactor) and, for the technical minded, it develops about 1500 horsepower to push the 143-foot long hull through the water at a rated 13 knots which is definitely short of supersonic. Just like *Ranger*, she has a flight deck and catapult equipment, but *Sunnadin* launches target drones.

The term "tugs" immediately will bring to the uninitiated members of the Navy visions of brawny midget-size craft, puffing their way through harbor traffic, heaving and hauling on larger sisters or pulling a barge load of anything from gas to garbage. However, ships like *Sunnadin* head for deep water and the open seas to perform versatile services for combat units.

A tug's main job is towing, which the Pearl Harbor-based *Sunnadin* does most of the time. Most hauls are just for a few miles, but she can drag a load one-third of the way around the world nonstop if she must.

Towing cannot be termed glamorous, but it does require top-grade seamanship, fast thinking—and can be hazardous.

Take the time *Sunnadin* lost a towed target in a 15-foot sea with the wind blowing at nearly gale force.

She made four passes before getting alongside it, then hugged herself to the float while it drifted toward her stern. While *Sunnadin's* bridge gang maneuvered the ship to avoid a hull-penetrating collision, three crew members leaped onto the bobbing target to connect the towing wire.

By this time, the target had drifted too far away from the ship for their safe return. The three men made the five-hour rock-and-roll trip back to Pearl Harbor on the target float.

Often *Sunnadin* is called upon to tow ammunition barges out to sea to dump mines or cans of poison gas. "Floaters" that refuse to go down are punctured by rifle or machine-gun fire from the tug, sometimes with odd results. One time the radio circuits were filled with excited messages after an aviator sighted a great cloud of smoke near *Sunnadin* and thought the ship was in distress. The alarm was caused by *Sunnadin's* crew who, in sinking a smoke bomb, had filled it with holes, causing it to give off a cloud of smoke.

Sunnadin also acts as hare for the Fleet's "greyhounds." She steams on a prescribed course at a pre-set speed, making scheduled changes in both, while a destroyer over the horizon tracks her with radar. At day's end the tracking charts of both ships are compared to see how the warship's crew performed.

A small catapult is sometimes carried on *Sunnadin's* forecastle, which her crew refers to as the "flight deck." Small target drones are launched from the catapult and are controlled from the tug's bridge while accompanying ships try to shoot them down. If the drone averts the fire of sharp-eyed gunners, *Sunnadin* recovers it from the sea when its gas is gone.

Crewmen of the tug are as sharp as their ship, taking on any job assigned and doing it well. Radiomen and electronics technicians take their turn standing bridge watches, and since *Sunnadin* has a direct-control throttle, enginemen can stand watch topside rather than below, thus freeing bridge personnel who can do other sea jobs.

Working "out of rate" so to speak, makes *Sunnadin* crewmen well-rounded sailors and they learn more of a ship's workings than do men aboard larger craft. This develops ingenuity, as reflected when *Sunnadin* men built a ship's gangway for $100 after shipyard estimates for the job ran up to $2500.

Community projects of this sort have built a high pride in the crew of about 40 men who take *Sunnadin* to sea for assignments with the "New Navy" of the atomic age.

— Charles A. Coe, JO3, USN

It's All Done with Mirrors

NORMALLY CONSIDERED as an adjunct to vanity and/or illusion, mirrors are now helping Navy pilots to stay on the straight and narrow path.

A Mirror Landing System, which guides the pilot down a thin beam of light to a safe carrier deck landing, will soon be installed on all our angled deck carriers and shortly will be a fixture on the runways of 60 Naval Air Stations. The result of some nine years of Navy research, the system has been in use on various carriers for two years and, in that time, coupled with the angled deck, has reduced the number of carrier landing accidents by more than one third and has resulted in savings in the neighborhood of $20 million a year.

Briefly, the mirror reflects a beam of light toward the eyes of an approaching pilot, establishing a glide path which, if followed, will insure him a safe landing. To follow the glide path, the pilot simply maneuvers his plane so that a "meatball" of light reflected from the four yellow source-lights is centered in the four-foot square mirror.

If the pilot allows the meatball to drop toward the lower edge of the mirror he will fall below the ideal four-degree glide path and touch down just over the ramp end of the flight deck, catching the first or second arresting cable. Centering the light, the plane will catch wire No. 3 which is ideal. If the meatball rises to the top of the mirror the plane will hit far up the deck, engaging wire No. 4 or 5 or miss the arresting gear entirely.

When the pilot lets the ball of light wander off the top of the mirror he will more than likely overshoot and miss the arresting gear. With the meatball below the mirror he is going to undershoot and is a likely candidate for the spud locker.

Under the old system still used on straight deck carriers, the pilot made a "constant attitude" approach to the carrier, maintaining 100 feet of altitude during his final approach. As he turned toward the carrier stern the landing signal officer (LSO) guided him to a landing with directions given by the movement of hand paddles. The pilot had no more than three to four seconds to perfect his approach. That's not enough time for today's speedy jets as they approach the arresting gear at speeds exceeding 100 knots.

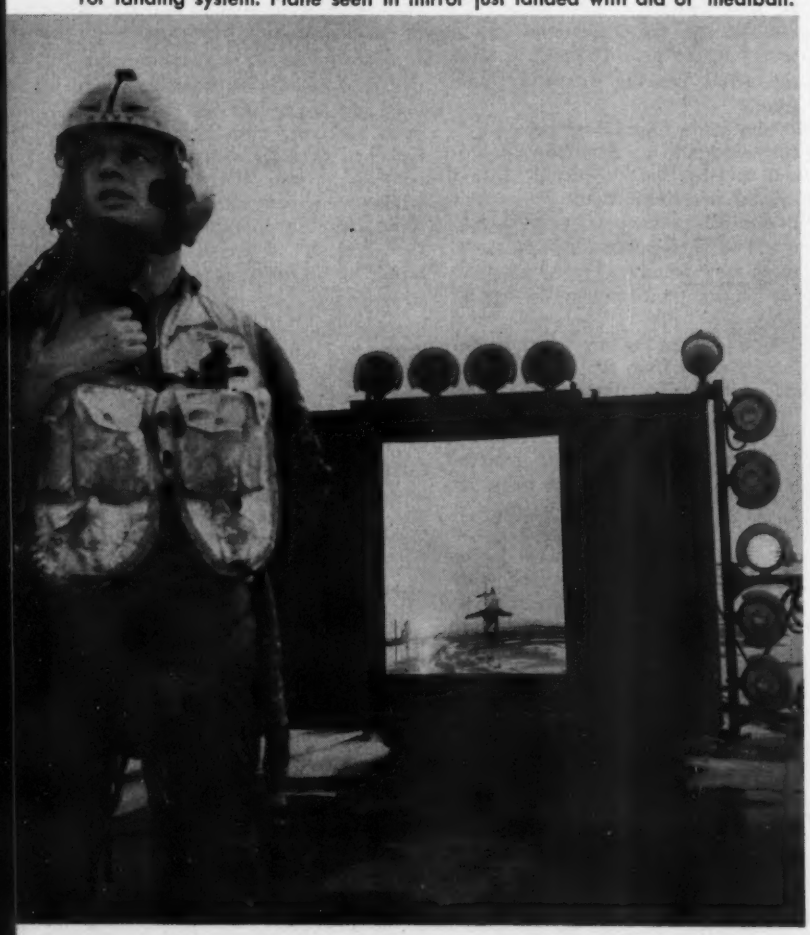
The mirror gives the pilot approximately 20 seconds to perfect his approach from the time he first sights the meatball and lines up with the center line of the landing area, until he touches down.

An example of how the system works in actual operation was demonstrated by a squadron aboard USS *Randolph* (CVA 15) on a recent Med cruise. The division of F2H-4 *Banshee* jet fighters broke up at night about 28 miles astern of the carrier while flying at 20,000 feet. They approached the ship at one-minute intervals, descending toward the 500-foot approach altitude Five miles from the ship they "dirtied-up" the plane (lowered landing gear, flaps and tail hook). At three miles they could see the runway lights on the flight deck and from there on in they were guided by the meatball and the deck center line lights.

The Carrier Air Group aboard the mirror-equipped *Randolph* did not suffer one landing accident during the entire six-month cruise. Normally, four or five would have occurred. This was credited to good flying on the part of the pilots, the angled deck and the Mirror Landing System.

This optical landing system does four things: it raises the landing pattern from 100 to 500 feet, short-

TOUCH DOWN—Navy pilot LT Verick stands in front of *USS Saratoga's* mirror landing system. Plane seen in mirror just landed with aid of 'meatball.'



HANDS OFF—Once the automatic landing system takes over, the pilot can sit back and let the plane land itself.

A Touch Down at Sea without Hands — It Can Be Done

"LOOK MA, *no hands,*" has become the cry of Navy pilots testing the new Automatic Carrier Landing System which allows "hands off the controls touch downs" in weather so bad that a conventional landing would be impossible.

Pilots on the aircraft carrier USS *Antietam* (CVS 36) have had to find other uses for their hands as an electronic brain guided their planes to safe landings on the angled deck ship. The test pilots could monitor their approach toward the carrier stern by watching the meatball reflection in the mirror, but the plane was being flown by an automatic pilot housed in the aircraft.

This "pilot" received its knowledge via a radio link transmitting the conclusions of an electronic computer on the carrier. The computer based its answers on raw material obtained by radar following the plane's approach, taking into account the yaw, pitch and roll of the carrier.

The mobile landing system, housed in two vans on the carrier deck, picks the approaching plane up on radar about two miles away from the ship. The antenna system of the radar keeps the beam locked on the inbound plane until it touches down or is given an electronic wave-off. If the aircraft is pushed up, down or to either side by air currents it is returned to the glide path by the computer-directed automatic pilot. If the ship yaws, thus changing the direction of the glide path, the corrections are ordered by the computer provided sufficient time remains. If not, the wave-off lights are flashed, the plane accelerates and moves into a climb to a predetermined altitude where the pilot resumes control.

Successful landings have been made with the system locking on to an aircraft one mile astern of the ship. It has also directed touch down approaches that began as far away as 10 miles.

More than 1500 shore landings were made with the Automatic Carrier Landing System before it was taken aboard ship for testing. Six different types of jets have responded to its signals along with large transports and light commercial planes.

When the Navy awarded the contract for the test model it specified that a controlled plane should touch down no more than 10 feet on either side of the landing area center line. During a carrier demonstration the test plane made nearly all of its landings in a 20-by-40-foot area.

An engineer who was proving the device to onlookers went so far as to adjust the equipment so the touch down would be three feet to the left of a previous landing. The plane, locked in the adjusted glide path by radar, hit the predicted spot.

The ability of the system to guide a plane to a safe landing even in zero-zero weather will greatly increase the value of carrier-based planes in combat. Missions will be cancelled only by seas so rough that flight deck operations are impossible. Another advantage of the system is its ability to guide an injured or exhausted pilot to a safe landing.

The Automatic Carrier Landing System is still experimental and has not yet been accepted by the Navy.

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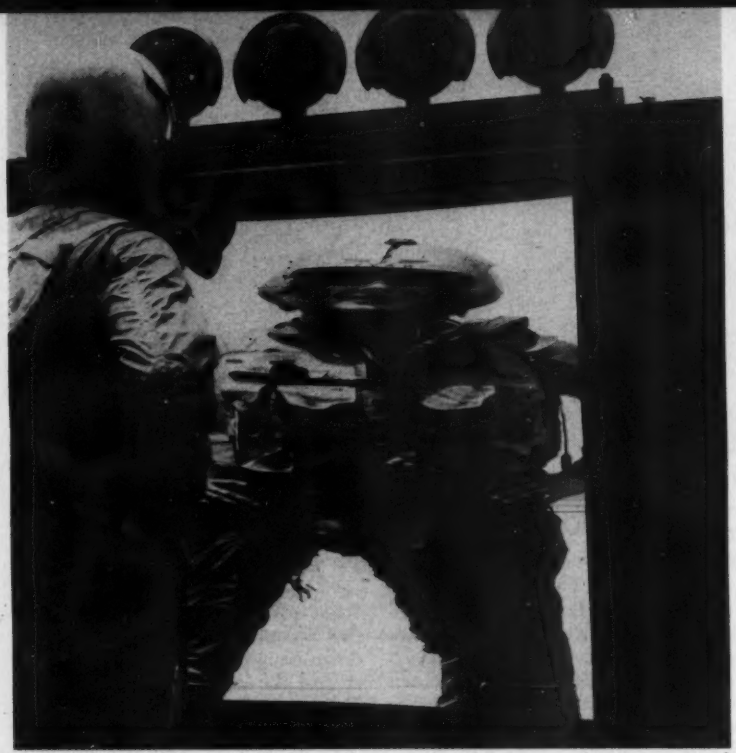
ens the training period of an air group by one-fourth the normal time, prevents under- or overshooting, and permits a straight approach to the ship which is invaluable at night.

Raising the landing pattern to 500 feet reduces the strain on a pilot's nerves. Forced to rely on an altimeter that is affected by changing barometric pressure, a pilot flying at extremely low altitude has difficulty during daylight hours and especially so at night. At the higher altitude a pilot can concentrate on maneuvering his plane without fear of striking the water.

Also the 500-foot altitude and glide-angle approach is similar to that used for a field landing. A pilot, familiar with making his base leg at this height when approaching an air station, can qualify for carrier landings much faster than when using the LSO system of maintaining a constant attitude during the landing run.

The LSO system was determined inadequate when early jet planes were being tested in 1948. It was decided that a constant glide-path approach to the carrier was the best system to use for the faster planes, but a glide system was necessary. A prototype of the British mirror system using a metal reflector was adapted for American carrier operations and was installed in 1955 on the USS *Bennington* (CVA 20).

The theory behind the Mirror Landing System was proven to be correct and the Navy launched a search for the proper reflecting surface. Plastic, steel and aluminum were tested and failed. The meatball



MIRROR TRICK—The optically ground concave surface may reflect some wierd sights, but it is also credited with reducing landing accidents by one third.

appeared fuzzy or distorted, or in some cases spilled over the edge of the mirror. Finally a ⅜-inch piece of high quality plate glass, ground on both sides, was used. It was bent to the correct curvature and the concave surface further ground and polished to optical precision.

The mirror film (chromium alloy) was literally exploded on to the glass to a thickness of about six millionths of an inch. This mirror is of the "first surface" type with the reflecting substance on the face. (Home mirrors are normally of the "second surface" type with the reflecting substance on the back.)

The landing mirror is installed on the port side of the flight deck in a stabilizing frame that keeps the glide angle reasonably constant as the ship pitches. The horizontal center line of the mirror is indicated by a row of green lights on each side of the frame (datum lights) while red "wave-off" lights vertically line the sides of the mirror. If deck conditions are such that a landing cannot be accomplished, if something is wrong with the plane or its approach, the LSO who monitors the mirror's operation turns on the flashing red lights warning the pilot away. Also operated by the LSO are four green "prop cut" lights at the top of the frame which tell the pilot of a propeller-driven plane when to cut his engine.

The four brilliant source lights are installed approximately 160 feet aft of the mirror. They remain at a constant position while the mirror can be moved up and down to compensate for the varying height of the pilot's eye in different types of planes.

More than 100,000 carrier landings and 400,000 field landings have been made with the mirror, so the Navy knows just what it does. The angled deck plus mirror has already reduced the carrier landing accident rate from 30 to eight per 10,000 touchdowns, a saving of 300 accidents per year and about $50 million. During one recent three-month period the rate dropped to five accidents per 10,000 landings.

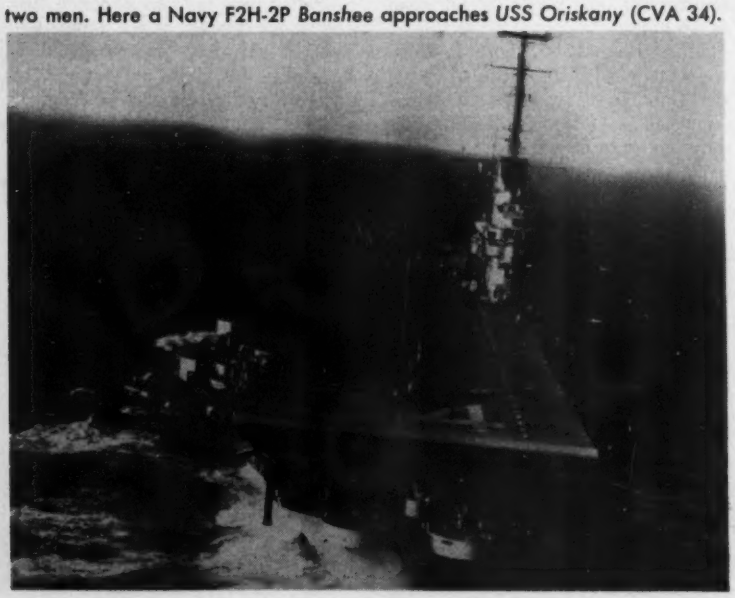
Destined for all Navy runways in the near future, the mirror will bring about a 50 per cent reduction in accidents, according to the prediction of authorities.

The Mirror Landing System is still not the best system possible. It does not take into account speed or the horizontal position of the aircraft, but it is saving lives while the research for improvements goes on.

An automatic carrier landing system has successfully completed land trials and is undergoing carrier tests (see page 13). But until this system or another is accepted by the Navy, the Mirror Landing System will continue to save lives and dollars on Navy carriers. Coupled with the angled deck carriers, it has brought about a radical change in ship-based flight operations.

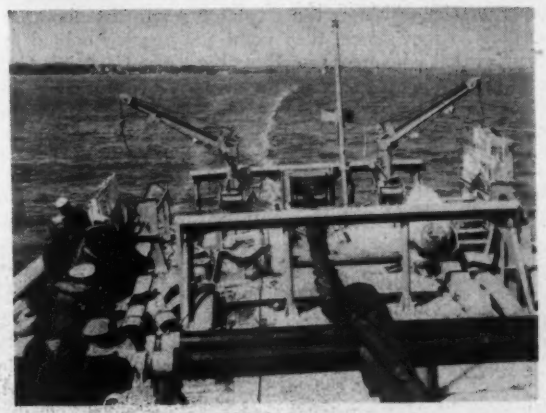
William Prosser, JOC, USN.

OLD-FASHIONED carrier landing method required split-second timing by two men. Here a Navy F2H-2P *Banshee* approaches *USS Oriskany* (CVA 34).



EASY DOES IT — Mine student is shown mine assembly.

ALL MINE—Yorktown students receive lab instructions on moored mines. *Below:* Class session explains structure.



Handle With Care

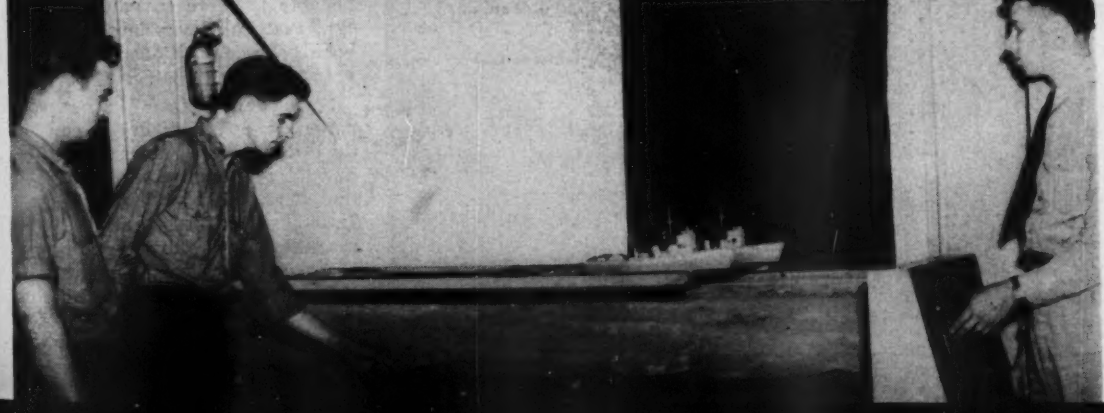
IF YOU COME by the jitters easily or have ever acquired the handle "butter fingers" here's a Navy school that you probably would not want to consider.

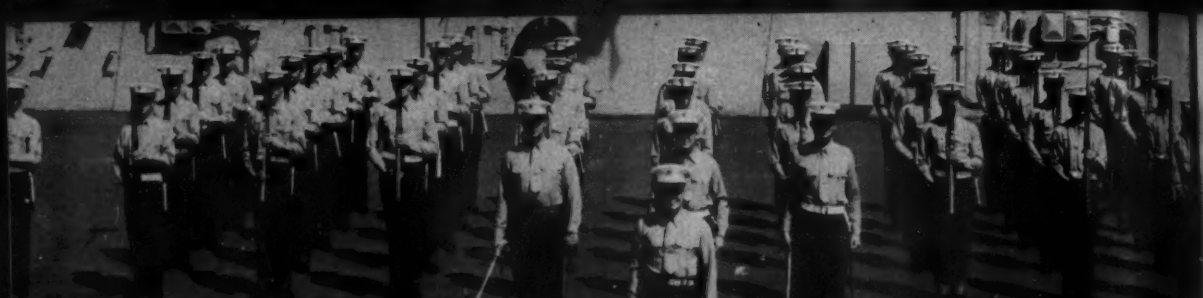
However, for those who are nimble of mind and fingers the Mine Warfare Schools at Yorktown, Va., offer training for officers and enlisted men in all phases of offensive and defensive mine warfare. Although they receive little publicity, these Navymen are learning a skill that is of utmost importance to the Fleet. Their studies range from the basic course in the Class A Mineman School to one in Minesweeping and Minelaying.

Future minemen at Yorktown are taught by doing. Actually working with mines and mockups, coordinated with classroom work on theory and basic functions, soon makes learning about the Navy mines with their highly complicated machinery and electronic circuits an interesting challenge.

The mineman's business is tough and tricky. If you are interested in finding out more about this school and the work Navy minemen are doing in the Fleet take a look at the February 1957 ALL HANDS.

MODEL STUDENTS — Future minemen watch sweeps clear magnetic field. *Above:* They set to sea to try it firsthand.





SCABBARD AND BLADE — A Marine detachment on board the *USS Franklin D. Roosevelt* (CVA 42) presents arms.

They Go to Sea — But They're M

This month, as the Marine Corps celebrates its 182nd anniversary, Navymen all over the world salute the men with whom they serve ashore and afloat, the "sea-soldiers."

ACCORDING TO THE CRUISE BOOK of USS *Lexington* (CVA 16) the Leathernecks in that ship's Marine detachment secretly believe that the man who really runs the ship is the Marine who serves as the Captain's Orderly. As evidence, they point to the fact that whenever something big and mysterious is going on the skipper calls for that individual — obviously to seek his advice.

Navymen (including *Lexington's* skipper) are likely to disagree with this version of the orderly's duties. And, there may possibly be a few Marines who don't actually believe that the orderly is the man behind the throne. However, even though sailors and Marines have both been serving at sea for a few thousand years, to some Navymen the duties of a seagoing Marine detachment are just about as mysterious as the reasons behind many of the calls for the Captain's Orderly.

Nowadays, except for Marine communications personnel on a few amphibious command ships, Leatherneck detachments regularly serve only in cruisers and large aircraft carriers. But, there was a time when every warship carried Marines or their counterparts. As far back as 1500 B.C. "fighting men" on the order of latter-day Marines were carried in Phoenecian vessels. Their job was to engage enemy ships in close-quarter fighting and to head landing parties. In ancient Greece the Epibatai, and in Rome, the Classiarii, performed similar functions.

The practice continued down through the ages and in 1664 Great Britain organized its Marine Corps—originally known as the "Duke of York and Albany's Regiment of Foot." This was a unit of 1200 "land souldgers prepared for sea service."

SEA SCHOOL—Two gunner's mates, members of *USS Yorktown's* (CVA 10) landing party, receive 30 cal. machine gun instruction from Marine shipmate.

The first two battalions of American Marines were authorized 182 years ago this month — in a resolution adopted by the Continental Congress on 10 Nov 1775. The resolution specified that the men recruited for this embryo Marine Corps should be "good seamen, or so acquainted with maritime affairs as to be able to serve to advantage by sea." Practically ever since then shipboard Marine detachments have been doing just that.

Since the American Marines were patterned after their British cousins, the three main specialties of the Continental Marines were to be about the same as those of the British "seagoing soldiers." In ship-to-ship combat they were to serve in boarding parties and supply men armed with muskets and grenades to fire on

MARINES

the enemy from decks and tops (platforms on the masts). In ship-to-shore action they were to be the nucleus of the landing party. And, when not engaged in these activities, their chief function was to prevent mutinies and in general, keep the sailors in line.

Naturally, the latter didn't endear the Marines to the men in a ship's crew, but before long, even the most bitter sailor had to admit that the Marines did do a pretty good job in combat. For instance, when John Paul Jones said "I have not yet begun to fight," (during the battle between *Bon Homme Richard* and the British *Serapis*), a grenade dropped into the hatch of the British ship by a Marine was one of the many valorous deeds by his crew that put teeth into those defiant words.

For 50 years or so following the Revolution the duties of a seagoing Marine detachment remained about the same as they had been in the Continental Navy. After that, with the advent of steam propulsion and long range guns, and the realization that American Navymen weren't the type to go in for mutinies, the Marines' duties began to take on their present-day form.

However, the primary function of a modern detachment, even on a guided missile cruiser, is a job which Marines have been doing ever since the days of the Phoenecians. According to *Navy Regulations* this is:

"To provide a unit organized, trained and equipped for operations ashore, as part of the ship's landing force; as part of a landing force of Marines from ships of a fleet or subdivision thereof; or as an independent force for limited operations."

As you probably know, most of the Marines' landings in World War II and Korea were made by units of thousands of men carried to battle in transports and LSTs—not by detachments regularly assigned to ships' companies.

However, this doesn't necessarily mean that the small landing party is a thing of the past. For example, when the lives and property of American citizens are in danger in foreign countries in peacetime, the landing party can still be a very effective means of protecting them. In this respect, the seagoing Marine detachment is something like a fire department—you may not need it every day, but when you do, it really is a handy unit to have on deck.

To make sure they'll be ready if a "fire" should break out, Marines at sea are given plenty of physical exercise, rifle practice and training in the various other skills that they may be called upon to use in such a situation. And, when a cruiser or carrier hits port and the liberty parties go ashore you'll often see the Marines head for the beach on business, instead of pleasure. There, they do postgraduate work in hiking, infantry tactics, amphibious warfare and the like.

Next to landing operations, the most important combat function of today's shipboard Marines is, "To

BROW SENTRY—Seagoing Marines make up the ceremonial guard, man anti-aircraft batteries, act as guards and fill orderly and gangway sentry billets.

FAMILY PORTRAIT — Seagoing Marines 1888-style look as though they mean business on board old *USS Boston*.

SHIPSHAPE—Marines at sea take time out from their shipboard duties to limber up and keep in shape with a session of physical exercise on deck.

provide gun crews." So, the Leathernecks also get their share of practice on the antiaircraft guns which they usually man.

Their third function, says *Navy Regs*, is "To provide internal security for the ship." And, in addition, "Marines may be detailed to other duties afloat, including but not limited to communications, staff, liaison, guard and aviation duty."

There's a lot of work to be done under these headings. For example, the Marines stand brow watches in port, screening visitors and seeing to it that unauthorized persons don't use the forward gangway. They get their share of compartment cleaning and the handling of ammunition and provisions. They guard the brig and such areas as the hangar decks for guided missiles. They furnish prison chasers, bank guards for the ship's disbursing officer, shark guards during swimming parties and special sentries whenever they are needed. They also provide orderlies for flag officers, the captain of the ship and, if the detachment's commitments permit, for the executive officer and any embarked senior Navy or Marine officer in command who is not a member of the ship's company.

A seagoing detachment is often called "the ship's guard," and one of its important duties is to render honors as prescribed in *Navy Regs*. For this assignment "spit and polish" isn't just a slang expression—it's a way of life to the seagoing Marine.

The "guard of the day," from which routine guard details are provided, stands by in prescribed uniform between Morning and Evening Colors so that it can turn out at a moment's notice to render honors to important visitors. In addition, it ordinarily parades for an informal guard mount and for Morning and Evening Colors when the ship is in port.

When you consider the size of a typical detachment (two officers and 65 EMs on a carrier and two officers and 40 EMs on a cruiser) and the duties which these men have to perform, you begin to realize that the life of a seagoing Marine can be just as busy as the life of a Navyman.

Officially, the detachment is a part of the gunnery (or deck) department. The detachment CO is usually a captain and his assistant is normally a lieutenant. Although the CO is not a department head, he occupies a somewhat similar position with respect to the administration of Marine Corps matters. He is also one of the division officers of the gunnery department.

The "rank and file" of the unit is made up of hand-picked young volunteers who've been assigned to the detachment straight from Sea School at either Portsmouth, Va., or San Diego, Calif. (See ALL HANDS for May 1956). During his four weeks at the school the Marine has been salted down with courses in such subjects as seamanship, gunnery, guard duty and shipboard lingo. Before entering the school he has been individually interviewed, screened and given every chance to back out of the training, which is even more intensive than that given in boot camp or combat infantry school.

Once he's assigned to a seagoing detachment the Marine normally stays in it for a two-year hitch, during which he must keep up the high standards that led to his selection.

Perhaps because of this careful selection, Navymen and Marines now get along with each other a lot better than they did in past years — even if the Marines do jest that their orderly runs USS *Lexington*.

'RIFLE, TRIGGER, OVER'—Marine personnel attached to ships and assigned to units ashore study communications techniques. Shown here is mobile radio.

PORTUGUESE craft shares sunset with CVA 42. *Below: FDR's* chaplain says Mass at Shrine of Our Lady of Fatima.

Stopover in Lisbon

THE WORD was passed to knock off all ship's work and make ready for a four-day stopover in Lisbon, Portugal. This welcome break came to sailors of a hard working group of ships of a task force in the Eastern Atlantic.

The Navymen found relaxation and Old-World pleasure in the native foods, beautiful countryside, clean streets and charming companionship of the Portuguese capital. Churches and homes unique for their use of pastel colors and impressive murals were a cameraman's delight.

Included in the liberty itinerary was a visit to the shrine of Our Lady of Fatima 70 miles from Lisbon. This is one of the many points of interest and few travelers ever miss it.

SOMETHING FISHY—Fresh catch attracts interest in fish market. *Left:* Cameras snap on Avenida De Liberdade.

UNPREDICTABLE LADY — A radarscope picture of a hurricane shows the counterclockwise movement of air around the calm center of the storm.

Watch Out

EACH YEAR between May and December giant rotary air masses roar out of the tropical doldrums or equatorial belt of calms in the North Atlantic bringing havoc to the Eastern seaboard and sending the frail ships of men scurrying for safety in sheltered harbors.

Clouds rise in this storm higher than many planes fly. Winds blow steadily at speeds reaching 125 knots, but gusts of nearly 200 knots occur. Waves build into mountains and then the wind tears their tops off, sending sheets of water hurtling through the air to tear at puny man-made objects. This is a HURRICANE.

These tropical cyclones as they are called by weather experts, are known by many names. In the China Sea they are *typhoons*. In Senegal they are *tornadoes* and off the Cape of Good Hope they are called *trovados*. On the West Coast of Central America the storms are referred to as *papagallos*, while in the Philippines they are called *baguios*. But no matter what name is applied to the whirling mass of wind, it means death and destruction brought about by a force estimated to be equal to two and one-half World War II-type atomic bombs exploding every second.

It is difficult to describe the characteristics of hurricanes, for they are as changeable and unpredictable as the women for whom they are named. One may charge to the west and strike the coast of Florida; another may drift slowly northward stopping for long periods of time, then come ashore in the Cape Hatteras-Norfolk area. A third storm center may stay far out at sea where it will turn to the northeast and blow itself out in the North Atlantic. This occurred during the 1955 hurricane season and to a greater extent during the 1956 season.

The season when the tropical storms can be expected to brew in the steaming tropics extends from May to December. September is considered to be the top month for hurricanes, followed by October and August.

Between 1887 and the present nearly 550 tropical storms were recorded in the Atlantic. More than half turned into full scale hurricanes such as the disastrous "Audrey," the first of the 1957 season. "Audrey" was born in the southern area of the Gulf of Mexico and roared almost due north to strike the coast of Louisiana with tremendous force.

Many perished in the storm and property damage ran into millions, but the losses could have been much greater if the Joint Hurricane Warning Service had not been in operation. Radar was used to track the storm when it developed. Navy planes penetrated the storm cell to gain information concerning the force it contained. These facts were used to develop forecasts and warnings concerning the hurricane's path and undoubtedly saved many lives.

But, owing to the changeable nature of the tremendous storms, the hurricane warning flags sometimes hang limp after the Fleet has steamed for sea or sought shelter in hurricane anchorages and after hundreds of planes have flown to safety. The hurricane has passed by far out at sea, forced there by a lifesaving wind current. However, the storm could just as easily have roared ashore pushing ships aground, snapping heavy mooring lines and tearing aircraft from their tie-downs.

A typical storm that could cause such damage developed far out in the Atlantic where a disturbance occurred in the prevailing easterly wind current. One strand of the undulating wind system, blowing from east to west, tumbled from its course and began to circle to the south. Soon it was joined in the counterclockwise rotation by other winds causing the formation of a low pressure area.

A ship passing across this area would have noticed an unsteady and possibly falling barometer and, when it reached its lowest point, an increase in temperature. The sky could have been cloudless, but in a grow-

Out for These Ladies of the Sea

ing storm the clouds would begin to mount, and more and more air would flow into the center of the system and rise through the "eye" of the storm to the top of the disturbance, then it would flow out in all directions.

By the time our typical storm had become an adult (life expectancy about nine days) it would cover a circular or oval area, some 300 miles in diameter. The winds near the eye would climb to more than 100 knots and slack off at the outer edges to about 40 knots. The entire cell would move northwest toward the coast at a speed of about 10 knots.

Now suppose you are in a similar storm. On board your ship somewhere in its path, things have been normal with an average amount of wind and sea action, but the skipper has been informed of the storm's movements by situation reports sent out by the U. S. Fleet Hurricane Forecast Facility, Miami, Fla., every six hours. These reports give the position, force and anticipated movement of the hurricane. After the storm path has developed the captain takes the necessary action to insure the safety of the ship.

If possible he runs for cover, leaving a clear and unoccupied sea for the storm to tear to pieces, but if orders dictate, he might stay on station until the last minute. During this period a drop of .10 inch of barometric pressure in a three-hour period may have been noticed. Cirrus clouds (very light and delicate) are replaced by heavier types at lower levels. Soon a bank of dark gray clouds appears on the horizon, and the wind becomes gusty. Facing the storm the wind will strike your left side.

An unsteady barometer consistently falling will be logged on the bridge and the deck force will be rigging for heavy running as the clouds become darker and cover the entire sky. The ship will roll and pitch as a heavy cross sea develops and rain and wind will increase as the storm draws nearer.

All of these signs will have been noted by the captain of your ship and even if he does not receive the weather warnings he will have a good idea of where the storm center is by applying the law of "Buys Ballot," a Dutch physicist. (In 1850 Buys Ballott observed that with his back to the wind the low pressure center of the storm was to the left and the higher pressure to the right.) Actually the center may lie as far as 30 to 40 degrees ahead of the left.

By this time the waves will be climbing toward 50 feet and the winds blowing at hurricane force (more than 64 knots). From observations the skipper of your ship has learned that he is steaming along the track of the storm. To the left of the storm's path is the navigable semicircle and to the right is the dangerous semicircle where the wind and the sea will force him constantly toward the center of the storm. The winds will be higher in this segment of the hurricane for they have the added force of the storm's forward motion, possibly as high as 30 knots.

With plenty of sea room available the captain has already changed course (to bring the wind onto the starboard quarter) and started running. The winds will slowly shift ahead and the ship will be headed into the navigable semicircle making good her escape from the storm center.

If the skipper's observations convince him he is in the dangerous semicircle he will try to put the wind on the starboard bow and make as much headway as possible or if in the confused seas near the eye, he may elect to heave to.

Take the following case as another example. The skipper is a veteran of many tropical storms. He averaged two typhoons a year between 1948 and 1954. His know-how was gained not only in fighting the storms, but also through using passive resistance against their force.

His first experience in offering passive resistance came about by accident. Commanding a cargo ship caught in a Caribbean hurricane, he had put the loaded ship on a course for the navigable semicircle of the storm when the vessel lost all power. To the surprise of all hands the ship ceased to work so hard in the heavy sea and the action of waves and wind decreased as the vessel lay dead in the water. The center of the storm passed directly overhead and the winds resumed, but the ship escaped all damage except that received while trying to make headway.

He used the same method to ride out "Typhoon Ruth" in 1951, one of the most destructive storms to hit

NAVY HURRICANE HUNTERS observe storms, collect data, and pass this information on to weather centers who in turn warn all the ships at sea.

DANGEROUS HUNT — Pilot and plane commander checks his instruments on board the *Neptune* while on a hurricane-hunting mission over the ocean.

Okinawa. Leaving Naha Harbor late one afternoon as "Ruth" advanced toward the island he steamed his ship, a 4500-ton AP into the shelter of a small island 50 miles to the west. He stayed near the island for about 25 hours before abandoning the shelter and, with engines stopped, drifted with the storm to the east.

He estimated the wind at 140 knots and the wave height at 50 feet when the eye of the storm passed about 25 miles to the east. He indicated that there was no sea breaking on the deck, no jars or shocks and no damage—even though the transport drifted through the worst part of the storm.

This unique method is one of the paths open, under certain conditions, to a commanding officer if his ship is caught by a tropical storm that reaches hurricane proportions. The same methods a skipper would use in the North Atlantic would apply in the Southern Hemisphere, but in reverse. (For a detailed account of the passive resistance technique, see the MSTS Magazine, October 1955, published by the Military Sea Transportation Service, Navy Department.)

In the old days and in times not so long ago, a ship's skipper moving into a hurricane area had a big problem in that he might be sailing blindly into a danger spot. Today, a commanding officer would not be in the dark about a storm's location except possibly under combat conditions.

The location of storms is well plotted by the Joint Hurricane Warning Service, a combined effort of the Weather Bureau, Navy, Air Force and the Civil Aeronautics Administration. During 1956 each hurricane was followed by several of the 50 radar installations set up for this purpose. More of these electronic aids are being installed.

At a typical base, warnings were received telling of the path of an approaching hurricane. Hurricane Condition Three was set, indicating that the storm was 72 hours away. During Condition Two, a fly away was ordered and all aircraft that could get into the air left for bases out of reach of the hurricane. The harbor was busy as Fleet units headed for the open sea to give wide berth to the storm, or steamed to selected safe anchorages in a nearby bay. The ships that couldn't move to sea put over all the hawsers and cables they could muster to the bollards and bits on the dock. Even the anchor chain was snaked out and shackled to a heavy support some distance away. Harbor tugs moved into the sheltered side of the piers to stand by for emergencies.

All was in readiness shortly after the 24-hour warning came—Hurricane Condition One. Doors exposed to the water were sandbagged. Fuel trucks were lashed down on the air station parking area and emergency crews were standing by.

When the storm hit it was with all of its strength. Quonset huts strained against the cables that held them down. Sheets of rain blew against doors and windows, penetrating the tightest seals. After the eye of the hurricane passed, an unusually high tide driven before the 100-knot wind swept against the seawall spraying salt water over buildings and equipment. As the torrential rains began to ebb and the incessant lightning moved on, the base personnel began to check for damage. Again an early warning had kept the destruction of the storm to a minimum.

Responsible for tracking the storm and obtaining warning information about the forces contained in the advancing storm are "hurricane hunters." Navy flight crews assigned to

this task take their four-engined *Super Constellations*, twin-engined P2V *Neptunes* and even F2H *Banshee* photo planes into the storm itself.

These planes make daily reconnaissance flights, searching for tropical storms still in their early hours of life. The "hurricane hunters" know the moment the storm reaches hurricane proportions, and keep military and civilian meteorological services advised as to its force and direction of movement.

They enter the storm so that the coastal area will have adequate warning and, in the interest of science, bring back instrument readings, observations and photographs that are examined by scientists trying to determine the cause of hur-

ricanes and by weather experts who will issue forecasts and warnings.

Such missions are assigned to Airborne Early Warning Squadron Four (VW 4) operating out of the Naval Air Station, Jacksonville, Fla., as part of the Joint Hurricane Warning Service. Also flying hurricane missions is Light Photographic Squadron 62 (VFP 62).

According to the Hurricane Warning Service Agreement, the Navy air units are responsible for the Gulf of Mexico, and the Caribbean Sea, and work with the Air Force in a joint area that extends south from New York along the East Coast to Florida and then southeast to Puerto Rico.

The single-place jet photo planes

fly into the storms taking high-altitude photographs. The four-engined *Constellations* make high-altitude flights into the eye of the storm to track its position or skirt the edges keeping track of the hurricane by radar. The low-level flights are made by the *Neptunes* often at altitudes as low as 500 feet. At this level aerologists can observe sea conditions and determine the low-level speed of the winds inside the storm.

A flight in any one of these planes will begin in sunny Florida, but within hours the planes will be battling winds well over 100 knots and fighting wing-breaking turbulence. At high altitudes, lightning may riddle the plane with small holes.

Entrance into the storm is made at a point where wind conditions will give the smoothest flight (smooth is hardly the word to describe a trip similar to a roller coaster ride on a rough track in a wind tunnel with cold water pouring down your neck). Staying roughly parallel to the winds the plane penetrates to the eye of the storm. This calm area where the blue sky shows through the cloud cover, is about 14 miles in diameter. A few minutes of rest, observations, instrument readings and a cup of hot coffee and the flight out begins.

On this type of flight the *Neptune* will carry a crew of 11 while the larger *Constellation* will have a crew of 25 officers and men. The former can stay in flight for 14 hours, using, inside the storm, its two auxiliary jet power plants to aid the straining propellor engines. The "Connie" can make 18-hour tracking flights.

This year scientists hope to fire high-altitude rockets from a land base on the central east coast into various quadrants of a hurricane. The rocket will carry camera equipment that will make continuous photographs from high above the storm. The rocket will later be picked up at sea.

Another photographic project is a high-level balloon which would take time-lapse photographs from high above the storm. The balloon will be released in the path of an approaching hurricane and its altitude and direction controlled from the ground by dropping ballast by remote control. Different wind directions at various altitudes would be used to spot the balloon over the storm, the camera equipment would go into operation and the film recovered after the storm has passed.

Still another research method will be radar photography of hurricanes. VW-4 hopes to study one storm by air-borne radar photographs from its inception to decay. To do this the squadron will keep a series of planes on station around the clock for days.

Information gathered from Navy and Air Force "hurricane hunters," from military and civilian ships and island stations are used by the joint service to issue hurricane advisories and warnings.

The effectiveness of this service has been recorded in human lives. At one time 400 people lost their lives for every $10 million worth of damage. That figure has been reduced to about two to four lives for the same amount of damage.

For men "who go down to the sea in ships" any information that can be learned about hurricanes will be invaluable in safeguarding their lives. But until all is known about these vicious storms, the only safeguards for a sailor at sea are adequate warning and good seamanship.

—William Prosser, JOC, USN.

100-KNOT WINDS of hurricane-type storms push giant, hard hitting waves over ships, making navigation tricky and dangerous even for the saltiest.

LETTERS TO THE EDITOR

Enlisted Performance Evaluation

SIR: In the article "Recognition for the Outstanding Men in Your Crew" which appeared in the June 1957 issue, you said that the top men will be most severely penalized if marks in the new Enlisted Performance Evaluation System are not awarded realistically. I agree with this statement 100 per cent and would like to state the case of a shipmate as an example.

The highest mark this CPO received on the June evaluation sheet was 3.6. This was in both the conduct and appearance categories. The other three marks were 3.4. Many of the other instructors here feel that he is one of our hardest workers. He works through coffee breaks and lunch hours, studies at home at night and even writes and grades exams and blitzes at home.

He was told that he didn't get at least one 4.0 mark for the hard work because there wasn't any place on the sheet for that type of mark. I feel that the chief was above average in proficiency also. He never flunked an advancement in rating exam. He passed all the USAFI tests he took and graduated in the upper 25 per cent at the Navy Schools he attended. Yet, his marks were the same as those given to men who weren't working half so hard.

What I am trying to bring out, is not that my friend has or has not worked harder than others or that he is above or below average in proficiency, but that this new system seems just as subjective as the old.—A. N. B., PNC, USN.

• *First of all the marks assigned to your friend are considered above average. The two 3.6 marks indicate that he is in the upper half of the "highly effective and reliable, needs only limited supervision" category. This mark should be exceeded by only six per cent of the CPOs in the Navy. The 3.4 marks are in the lower half of this category and are intended to be exceeded by only 16 per cent of all CPOs. They are marks that are definitely a credit to the chief.*

Assignment of Enlisted Performance Evaluation marks is a prerogative of the commanding officer and each chief petty officer is evaluated on the basis of his performance relative to that of other CPOs assigned to his command.

The evaluation sheet does not contain space for marks concerning the "hard work" of any individual other than his proficiency in rating. If the CO feels that the man is deserving, he may comment on any work performed beyond his normal duties in the space provided.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Naval Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington, 25, D. C.

Note that the article you mentioned stated that severe penalization will result ONLY *if marks in the new Enlisted Personnel Evaluation System are not awarded realistically. That is to say, strictly on basis of performance.*—ED.

Nautical Charts

SIR: Page 17 of ALL HANDS, June 1957, carries an article entitled "Disposition of Deck Logs" wherein reference is made to certain Hydrographic Office periodicals.

In the next to the last paragraph the *Navy Notice to Mariners* referred to is "For Official Use Only" and is *not* therefore considered to be classified in a security sense.

The last paragraph refers to a periodical which is not distributed to the Fleet. However this office does distribute the "Monthly Information Bulletin" which is the media by which corrections to the Portfolio Chart List (HO Pub 1-PCL) and the Index Catalog (HO Pub 1-N(R)) are disseminated. This periodical, also "For Official Use Only," contains information on all nautical charts distributed by the Hydrographic Office distribution system.—Alan Hamersley, CDR, USN, Distribution Control Officer, U. S. Navy Hydrographic Office.

• *Many thanks for checking us out on Hydro publications—or at least a small part of them. We appreciate it when alert readers take pen in hand to help us keep* ALL HANDS *as accurate as possible.*—ED.

Special Evaluation Report

SIR: I have fulfilled all the time requirements and correspondence courses for taking the JO3 exam, but it appears futile. Only about one half of the total number of test points will be available to me.

I am an ex-NavCad and have been qualified for the E-3 pay grade for the required number of months (NavCads attriting after the successful completion of the 16-week pre-flight course automatically become E-3). However, I reported to my present duty station just in time to miss the periodical evaluation reports.

This means my performance factor is, in effect, 0.0 and I automatically lose a possible 50 points on the multiple. My department head would like to give me and other men in my predicament a special evaluation, but cannot do so unless our personnel and training offices are directed to accept it. Is there a directive to cover this situation?—M. G. R., SN, USN.

• *The directive you seek is in "BuPers Manual," Article C-7821, paragraphs 3b and 4b. The former directs commanding officers to insure that at least one evaluation, either regular or special, is made during each six-month period for all enlisted personnel under their command and that it be entered into their service record.*

Paragraph 4b hits at the heart of your problem. It states that special evaluations may be made at any time the individual's performance indicates that special cognizance should be taken of particularly meritorious or derogatory performance. Among other examples of what might influence such a special evaluation is "recommended for advancement in rate for pay grade E-4 and above."

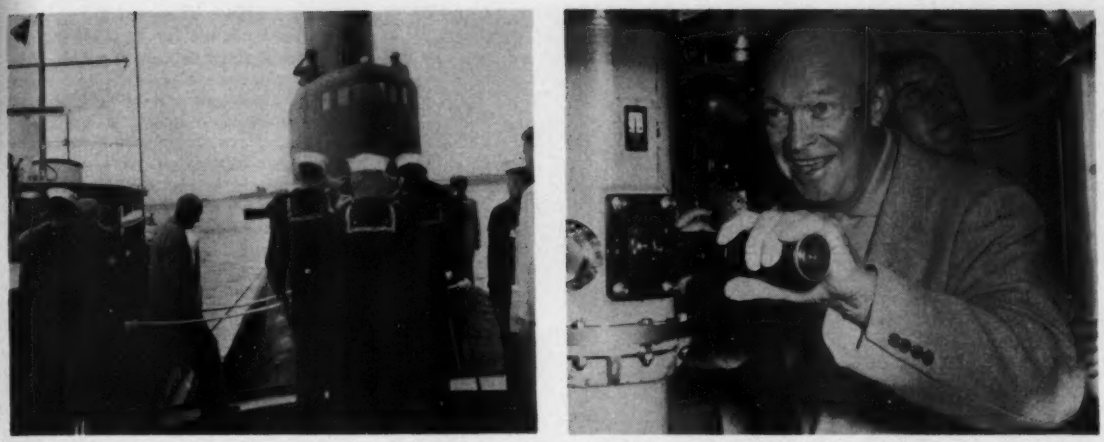
Careful examination of the two paragraphs would indicate that a special evaluation sheet might be proper in a case where a man has been recommended for petty officer advancement in a command which has not previously completed an Enlisted Performance Evaluation sheet on him.—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• USS *Dobler* (DE 48) — All hands who served in this ship and who are interested in holding a reunion during the summer of 1958 may write to J. R. Hudson, 1303 Merry Lane, La Marque, Tex.

• USN *Section Base, Santa Barbara, Calif.*—Members who served from 1942 to 1944 and who are interested in having a reunion may write to CDR R. P. Cook, USN, (Ret.), P. O. Box 774, San Diego 12, Calif.



SUBMARINER—President Eisenhower joined with the crew of *USS Seawolf* SS(N) 575 in making A-powered cruise.

Enlisted Advanced School Program

SIR: My wife and I have looked over the BuPers Instruction covering the Naval Enlisted Advanced School Program and have reached the conclusion that it is ideal for the career man. However, several questions have entered my mind.

This program requires four years' active service upon application. My first enlistment expires in November 1958. Will it be mandatory for me to complete this enlistment before I submit my application or may I submit my request before my enlistment is up?

When I entered the Navy I had only completed 9 and one-half years of schooling, but have since taken the GED test to meet the high school education requirement of the program which calls for a percentile score of 90 or above in parts III and V. I obtained a 93 in part III and 86 in part V. I feel that I could raise the latter score to the required level with a small amount of review. Is it possible for me to request this program even though I don't meet the eligibility requirement for part V of my GED?—G. E. M., PN2, USN.

• *The NEAS program has excited a great deal of interest among career Navymen who wish to continue their education. Applications for the 1958 program are due by 31 Dec 1957 and, as you undoubtedly know, you must have completed a minimum of three years of naval service by 1 Jul 1958 to be eligible and you must agree to extend for a period of six years beyond 1 Jul 1958 if selected. It is not necessary to wait for the end of an enlistment to apply for the program.*

Applicants who are not high school graduates must show that they are capable of undertaking college level work; hence the requirement for 90 percentile or better in parts III and V of the GED. Formal schooling for a period of 9 and one-half years with no indication of further study through correspondence, or Navy I & E courses, would probably not be considered evidence of a genuine interest in an educational program regardless of GED scores.

However, final selection is based on a consideration of all factors. A high grade on the screening examination could outweigh a minimum deficiency in the GED percentile ranking. Remember, this program is a strictly competitive one in which the best qualified candidates are selected. Basic mathematics, covering algebra, geometry and trigonometry, plus physics are essential to success in this program.

We are glad to see that your wife studied the instruction along with you. Navy wives play an important role in helping their husbands plan Navy careers that will be satisfying.—ED.

Change to Nuclear Weapons Man

SIR: I am serving on Recruiting Duty and would like to find out about possibilities for changing my rating to nuclear weapons man when the competitive examination is given in January. I have had four years of experience in that field.

Nuclear Weapons Man

I understand there is a study guide to be used in preparation for the examination. How would I be able to obtain it now that I am no longer attached to Special Weapons?—A. J. F., Jr., EMC, USN.

• *You'll find the specifications for change of rating to NW in BuPers Inst. 1440.22. Qualifications for advancement in rate in that field are contained in Change 9 to the "Quals Manual," which was distributed in August 1957.*

As for the study guides, you can get those from the nearest Forms and Publications Supply Stocking Point.—ED.

Submariners' Combat Pin

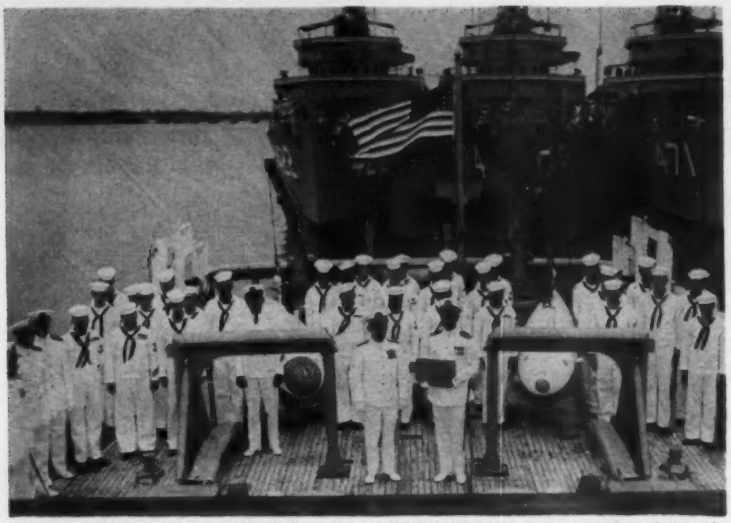
SIR: Change number three to *Uniform Regulations*, while containing a lot of good information, still does not pin down in writing where we old submarine sailors wear our combat pin when wearing large medals. Right now we wear it in one of two places: (1) Put the medals on first, then the combat pin below them on the pocket which looks very unseamanlike; (2) put the combat pin on just above the breast pocket, then place the medals above, which looks very neat.—R. G. B., LCDR, USN.

• *Not one but two articles in "U. S. Navy Uniform Regulations" take care of the situation. Take article 1521.5, which states that the holding bar of the lowest row of large medals is to be attached immediately above the pocket except that on the blue uniforms it may be placed just above the ribbons which are sewed on and covered with a dark blue patch. Article 0225.2(e)(4)c states, in effect, that the submarine qualifications insigne should be centered immediately above the medals and the submarine combat patrol insigne should be centered immediately below the medals. In other words, the combat pin would be placed on the pocket.*—ED.

Speedwriting

SIR: I am now a YN3 and hope to go higher in my rating in the future. Since I know I'll have to improve my shorthand, I'm thinking of taking a course in Speedwriting. Would this be an acceptable method of taking dictation for the performance test?—J. C. A., YN3, USN.

• *Yes, it would. As the YN3-YN2 training course says, any method of taking shorthand may be used. This would include Speedwriting. However, for advancement purposes, it is desirable that you use a system by which you may attain a speed of 120 words per minute.*—ED.



CLEAN SWEEP—Men of *USS Sagacity* (MSO 469) are presented with battle 'E' award by RADM W. E. Ferral, USN, ComMinLant. Lt. C. E. Boger is CO.

Reservist Going Regular

SIR: I have been in the Naval Reserve (TAR) Program since 18 Sep 1951 when I was recalled to active duty as a yeoman, first class. I am contemplating enlisting in the Regular Navy. Inasmuch as YN1 is not an "open" rate I would have to enlist as YN2.

I know I would be immediately eligible to take the service-wide competitive examination for YN1. If I passed this and was subsequently readvanced to YN1 when would I be eligible to take the examination for YNC? Would I be required to wait 36 months after readvancement to YN1 or would time spent as YN1 in the Naval Reserve be acceptable for this purpose?

I believe that I would be eligible for reenlistment bonus on the basis of a first reenlistment. Is this correct?—R. E., YN1, USNR.

• *Your active duty time as YN1 will count toward your eligibility for YNC. Also the time you spent as YN1 in a drilling unit under continuous service while on inactive duty counts one-half time for advancement.*

As to the reenlistment bonus, "Nav-Compt Manual" paragraph 044075-1 says an enlistment in the Regular Navy following discharge from the Naval Reserve is considered a reenlistment for the purposes of entitlement to the bonus. It would be computed on the basic pay of the rate held on the date of discharge. Basing our opinion on the information contained in your letter, you would be eligible for a first reenlistment bonus.—ED.

Officer Uniform Allowance

SIR: I am writing this letter to obtain information on the Officer Uniform Allowance as it applies to my case. In March 1944 while serving as an aviation pilot, first class, I received a temporary commission as ensign in the Naval Reserve and received my initial Officer Clothing Allowance.

I was released to an inactive Reserve status as LTJG in January 1947. In May of the same year I resigned my commission and enlisted in the Regular Navy as a Chief Aviation Pilot. I have now been selected for a temporary commission as ensign in the 1957 LDO Program.

The disbursing office has informed me that I will not be able to draw an Officer Clothing Allowance because I drew an allowance with my first commission in 1944. That was a long time ago. Am I eligible for an allowance at the present time?—P. A. W., ADC/AP, USN.

TALKING IT OVER—Crew members of *USS New* (DDE 818) chat with their CO after winning DesLant Battle Efficiency 'E' for third time.

• *As you say, it was a long time ago. If the information in your letter is correct, and if your temporary commission of this year as USN is made under the provisions of the Act of 24 Jul 1941 or the Officer Personnel Act of 1947, we suggest you talk to Disbursing again. It is possible that, although you earlier received a uniform allowance when you made ensign in the Naval Reserve, you are not entitled to another allowance on the basis of a first appointment in the Regular Navy. The book says—first appointment from enlisted status in the Naval Reserve equals one Officer Uniform Allowance; first appointment from enlisted status in the Regular Navy equals one Officer Uniform Allowance. The book doesn't say you can't do both.*

To spell it out in detail, your temporary appointment to commissioned rank in 1944 was effected from an enlisted status in the Naval Reserve and you received a uniform allowance on the basis of a first *temporary commission in the Naval Reserve.*

Again, apparently, you are entitled to a uniform allowance on the basis of a first *temporary appointment to a commissioned rank from an enlisted status in the* Regular Navy.

However, don't assume you can make a habit of receiving an initial Officer Uniform Allowance. If, for example, you were to be reverted to your permanent enlisted status in the Regular Navy and were again appointed to commissioned rank, you would not be entitled to an initial *uniform allowance. All clear, now?*—ED.

More on Cyclops

SIR: I was interested in the theory of LCDR M. S. Tisdale concerning the disappearance of USS *Cyclops*, as presented in the August issue.

His article is not only plausible but convincing—to almost anyone but a stubborn Missourian like myself. Here are my reasons for doubt:

In the summer of 1916 I was a passenger on *Cyclops*' sister ship, *Neptune*, bound from Norfolk to the West Indies and the Canal Zone. *Neptune* hove to off Parris Island to take aboard replacement Marines for the various landing forces ashore in the Caribbean area.

The crew of *Neptune* pointed out to me the top-hamper of the collier *Hector*, sunk at that spot. *Hector* was loaded, as was the custom of the type, with full bunkers aft and forward, with the midship bunkers holding miscellaneous freight and rigged with bunks for passengers. Therefore, there was no weight amidships to speak of. She, too, was hove to, awaiting passengers and rolling, pitching and working in the

seaway. Suddenly she broke in two amidships, and sank.

Cyclops was loaded in the same manner, but with heavy manganese ore, not coal. Seems to me that she would be much more likely to break up than *Hector*.

Speaking of missing ships, does anyone in your office or among your readers know what happened to the Indian type tug—I've forgotten her name—that disappeared some place between Diamond Head and Samoa. She had two 500-ton steel lighters hooked up in a tandem tow. No trace of her has ever been found.—Earl E. Sutton, BMC, USN (Ret).

• *It is gratifying to receive letters such as yours demonstrating not only an interest in the articles but having something to add to them.*

The theory which you present concerning the disappearance of Cyclops *is interesting, logical and as plausible as any. However, as you know, no way has been found to determine the exact circumstances of the disappearance.*

As for the fate of the "Indian type tug," you have us two-blocked unless you happen to remember the name or, at least, the date. Perhaps some of our readers may be able to give you a clue if they recollect the incident.—ED.

Reserve Status

SIR: I am one of the inductees who will be discharged by the end of this year. I had no Reserve service nor active duty before I was drafted. Can you tell me what my Reserve status will be after I am released?—J. W. P., FTA 3, USN.

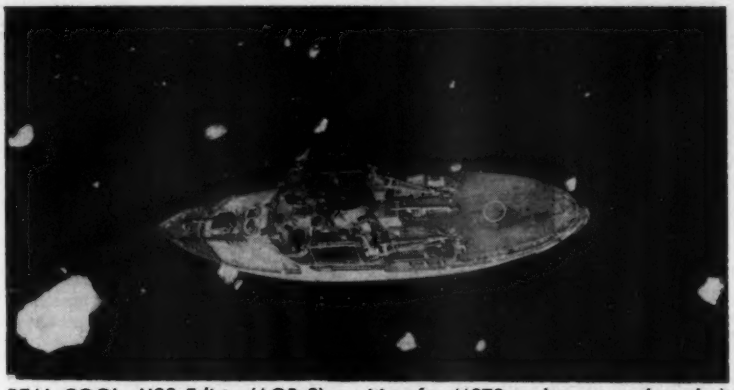
• *We can, and we will.*

By law, every man entering the armed forces after 9 Aug 1955—regardless of whether he's enlisted, appointed or inducted—has a minimum six-year military obligation.

When you complete your active duty you will be transferred to the Ready Reserve. At that time you will have a choice as to whether or not you want to join a drilling unit. If you do, you will be eligible for transfer to the Standby Reserve when the combined total of your active duty time and the length of your satisfactory participation in an accredited training program equals five years. After that, you would be in the Standby Reserve for an additional year.

Incidentally, in your case a year of "satisfactory participation in an accredited training program" is defined as attendance at a minimum of 24 drills (or less than 10 per cent absence if assigned to a 48-drill unit), plus 14 days' active duty for training—both completed within four consecutive quarters.

If you don't join a drilling unit you will remain in the Ready Reserve until your active duty and Ready Reserve time add up to six (instead of five) years.—ED.



REAL COOL—*USS Edisto* (AGB 2), waiting for MSTS tanker at southern belt of ice field. This year's ice conditions have been heaviest in Arctic history.

Naval Aviation Observer

SIR: Here is a question that comes up often among enlisted Bombardier-Navigators. Are we entitled to wear the Radar Observer Wings that commissioned Bombardier-Navigators wear? The reason I ask is that we are doing the same job in pre-flight preparation and the same in-flight duties. The specialty job code number we receive after completing the twenty-week course at HATULANT, NAS, Sanford, Fla., shows we are qualified as Bombardier-Navigators.

Another question, what are the requirements for wearing Aircrew wings?—P. V. K., AQ1, USN.

• *What you refer to as a Radar Observer Wing is apparently the Naval Aviation Observer insigne. In order to wear it, you would first have to be designated as a Naval Aviation Observer. Only commissioned or warrant officers in the Navy or Marine Corps who have successfully completed the course prescribed for Naval Aviation Observers, and who have not less than 100 hours in the air, may be designated as Naval Aviation Observers. This ruling is according to a public law passed by Congress (see Title 10 of the U.S. Code, Section 6024). Under this law it is not legal to designate an enlisted man as a Naval Aviation Observer.*

You are, however, eligible to qualify for the aircrew insigne. OpNav Inst. 1510.4, BuPers Inst. 1220.8 and article C-7403 of the "BuPers Manual" outline qualification requirements for combat aircrewmen. Anyone who qualifies as a combat aircrewman is authorized to wear the aircrew insigne.—ED.

Tax Regulations Concerning Sale or Exchange of Property

SIR: The May issue of ALL HANDS declares that losses from the sale or exchange of property are deductible items in computing taxable income for federal income tax purposes.

Certainly not all losses from the sale of property are deductible. It is a matter pretty well established and understood that losses on the sale or exchange of an individual's own personal belongings or assets, whether real or personal, are not deductible. The law limits deductible losses to those incurred in a trade or business, losses incurred in a transaction entered into for profit, and losses resulting from a casualty or from theft. The ALL HANDS article makes no distinction between losses on sale or exchange of property held for personal use and business or investment property. It should have been pointed out that losses on the sale of an individual's residence or personal belongings are not deductible—J. A. J., Jr., CDR, USN.

• *Thank you for bringing this matter to our attention. Realizing the importance of federal income tax information we had had the article to which you refer checked by tax authorities to correct any misstatements. However, the best laid plans . . .*

The reprint of the material in the May issue of ALL HANDS *which has already been distributed to all officers and enlisted men on active duty under the title of "Rights and Benefits of Navymen and Dependents" (NavPers 15885A), was changed to say "Losses from sale or exchange of* business *property are deductible items."*

Complete information concerning federal income tax is contained in the Bureau of Supplies and Accounts pamphlet "Federal Income Tax Information." However, if your tax problem is of a serious nature, we would suggests that you contact BuSandA (Attn: B1), Navy Department, Washington 25, D. C.—ED.

Performance and Leadership Count, As Well As GCT

SIR: I see that the Navy policy is to discharge men in the lowest GCT grouping. I'm a seaman with a GCT of 40. I know I can make Chief some day, and I want to make a career in the Navy. What's the straight scoop?
—J. T. A., SN, USN.

• *First off, let's get something straight — GCT can give a good indication of how fast a man can learn, especially in a Navy school. It is not an I.Q. score. It does* NOT *tell that a man is or will be a good petty officer, or a good leader. To illustrate this point, as of February 1957, there were substantial numbers of petty officers in the Navy with GCTs of less than 42, of which a significant percentage were Chief Petty officers.*

The fact is — discharge, under the instruction you asked about, is not *based solely on GCT. Here's the straight skinny:*

Separation of men with Group IV rating is contingent on the over-all potential for useful service and performance record — not on the the GCT alone. The Chief of Naval Personnel, in BuPers Inst. 1910.11B, has set up the following criteria which govern the separation of this group, specifically, non-petty officers who have served continuously an active duty for more than 18 months, who have a GCT of 41 or less AND

"1. Who are not potential petty officer material. *Petty officer potential should be judged on (a) over-all performance, (b) lack of progress toward advancement in rating, i.e., not having passed a service-wide examination, not having completed specified practical factors, training course, or performance tests;* OR

"2. Who are a burden to the command. *Performance* approaching *that warranting recommendation for undesirable discharge is the criterion in this case."*

Men in the so-called Group IV or GCT rating can reenlist and can make a career in the Navy; they can and do go up for rating, including up to CPO.

However, there are certain capabilities or potentials for service which must be considered. Your commanding officer's recommendation is the governing factor in the matter of your reenlistment.

If, in his judgment, he considers that you have over-all potential for future useful and responsible service and provided further, that you have maintained a satisfactory record and shown progress toward advancement in rating, he will recommend you for reenlistment.

Once you have reenlisted and become a "career man" the Chief of Naval Personnel has given this assurance in BuPers Inst. 1133.11: "Provided performance continues satisfactory, any man who has been accepted for a succeeding term of service should have reasonable assurance that he will be permitted to serve until eligible for retirement or transfer to the Fleet Reserve. Such assurance is fundamental to the concept of a naval career and is given to men who are dedicating themselves to the service of their country."

Thus, anyone who performs creditably, shows continued improvement and gives promise of potential for future useful service, as borne out by the commanding officer's recommendation, can rest assured he can find a rewarding career in the Navy.—ED.

Does Her Mission, Plus

SIR: In the July issue (page 19) you published a letter about the Fleet Tug USS *Quapaw* (ATF 110) in which "due modesty" was exercised. You asked for comments from other contenders, including USS *Ampere* (ADG-11) and *Mataco* (ATF-86). *Ampere* has since been decommissioned, so here goes:

Quapaw boasts of steaming 19,666 miles in 3312 hours during 1956. Take a back seat, sister, as we *(Mataco)* steamed not 19,667 but a mere 24,092 in only 2701 hours. We don't believe in wasting any time.

So far as *Quapaw's* seven reenlistments, *Mataco* had nine and two extensions.

Mataco is again in WestPac. While en route, we steamed 8984 navigational miles delivering barges to various far-flung islands, participating in salvage and rescue ops, towing targets and launching drones during Fleet gunnery exercises. So you see, we do our mission—plus.

I contend that *Quapaw* should be humble rather than "duly modest."—H. R. S., EN1, USN.

• *OK! . . . OK! . . . OK!!! Well Done!*—ED.

The Greeks Have a Word for It

SIR: The upper right-hand picture of the article about Greece on page 35 of the August issue seems to be in error. This appears to be a view of the principal church in Augusta Bay, Sicily, which I am familiar with after several visits there. It certainly does not resemble any of the Greek churches I have ever seen on my frequent visits to Greece. My wife, a native of Piraeus, who lived in the Athens area until late 1951, fails to recognize this view as a Greek church. Furthermore, the type of carriage shown in the photo is familiar in Augusta Bay, Sicily, although I have seen the type of carriage in Kiphissia, Greece, where we spent our honeymoon.—L. A. K., LCDR, USN.

• *You are right. The church pictured is one in Augusta Bay, Sicily.*

You must know the area well and have a sharp eye to detect this work of the "gremlin" that sometimes practices his dirty work in our office.—ED.

Study of Compressed Gas Systems

SIR: I would like to find out about the oxygen-nitrogen generating plant school. I'm sure there is such a school and I think it's in Norfolk, Va., but I haven't found any information.

The main points I'm interested in are these:

Who is eligible for the school? Where is it? When does it convene? Can a man go to it as TAD from his station? Since compressed gas systems are being used more and more aboard aircraft carriers, I believe this is becoming an important field.—B. D. G., AB2, USN.

• *The U. S. Naval School, Compressed Gases (Class C) is located at the Norfolk Naval Shipyard, Portsmouth, Va. Classes convene every nine weeks and the course lasts for 18.*

Personnel may be sent to the school in either a TAD or TERMINS status. However, the rates eligible for the school include only UT3, BT3, EN3, MM3 and above, so your chances of getting into it are pretty slim.—ED.

Pay for Umpire and Referee

SIR: Can you answer this question for me?

Is it permissible for a Navyman in a duty status to umpire or referee ball games during normal working hours and get paid for it? In this case he would be getting two checks, one from the Navy and one from Special Services.—C. S., MN1, USN.

• *Definitely not. In order to be paid for your services as an umpire or a referee you would have to be in an off-duty, liberty or leave status while performing such services.*—ED.

Teaching Jobs for Navy Wives

SIR: My wife is a college graduate holding a B.S. degree in English. I would like to know if it is possible to be assigned to an overseas location where there is a need for teachers.—B. C. M., GM1, USN.

• *Attempts are made to coordinate overseas shore duty for enlisted personnel with employment of their wives who are qualified as teachers. The following conditions must exist before requests for such duty can be granted: (1) you must be eligible for foreign shore duty and in a pay grade entitling you to dependent's transportation; (2) the period of obligated service must be sufficient to extend through completion of the minimum tour of overseas shore duty;*

(3) there must be available billets at bases concerned for the personnel desiring such duty; (4) your wife must desire teaching employment and must equal or exceed required minimum qualifications as outlined in BuPers Inst. 1755.2.

Assignments to such duty usually are made by ComServLant or ComServPac with the selections for this type duty most frequently made from men currently on sea duty with one of the Fleets.

Your wife's application, on a Civil Service Form 57, with a resume of college credits, should accompany your request when you submit it through normal administrative channels.

Although there is no program whereby duty assignments for officers are coordinated with employment of their wives as teachers, officers' wives desiring to teach frequently are employed when they are qualified and present at location of the school.—ED.

Shore Duty for HMs

SIR: I am writing in regard to the newly established sea-shore rotation plan, commonly referred to as Seavey. I would like clarification of the status of Hospital Corpsmen such as myself who commenced their overseas tour on or after 1 Jan 1956 and therefore have missed the first part of the Seavey. As I understand it, we will not be placed on the Seavey until rotation data cards are issued in 1958. Will we, after completing the prescribed overseas tour, be made available for assignment within the Fleet at the discretion of the distributional commander?

It is commonly known that HM billets are found primarily ashore, either overseas or in the CONUS. This is particularly true of E-5 and below. I would like to ask just how many E-5 Hospital Corpsmen are still at sea under the old sea-shore rotation program?—W. F. W., HM2, USN.

• *Take a look at the September issue of* ALL HANDS. *The center pages are devoted to a layout that will explain the operation of Seavey and will give you an idea of the effect it will have on your sea/shore rotation. The new program will provide very favorable shore duty tours for the HM rating because of the large number of HM billets in the continental U. S.*

Men in the HM rating who are assigned to overseas shore duty immediately after shore duty in the continental United States could be eligible for reassignment to another sea duty unit before being returned to U. S. shore duty. However, personnel whose overseas shore terms expire before their entry in the Seavey could request an extension of their tour so they will be on the Seavey when their term expires. Normally, personnel in the program will be ordered ashore when their overseas terms expire.

Approximately 793 HMS in pay grade E-5 and below are scheduled to receive rotation data cards for segment 3 of the Seavey effective on 1 Oct 1957.

—ED.

At Anchor or Underway?

SIR: During our stay in WestPac we used either our port or starboard anchor for a maneuvering aid while going alongside a pier. At the time we were still underway and dragging the anchor. I claim that through the definition of anchoring, a ship is not anchored while using the anchor for a maneuvering purpose and no display of the anchor ball should be made. Others claim that as soon as the anchor hits the bottom the anchor ball should be displayed regardless of the reason.—A. J. S., BM2, USN.

• *In a maneuver such as this, the anchor ball is* NOT *displayed. A vessel with her anchor on the bottom but which is moving over the ground is a vessel underway. She should display the signals for a ship underway and not those for an anchored ship. Rules relating to night and day signals for anchored vessels apply to ships lying at anchor not expecting to move.*

Displaying the anchor ball allows other vessels to plan their own movements on the assumption that the vessel is in a relatively fixed position and will remain where she is. It would be misleading for a ship to display an anchor signal when she is maneuvering, be it ever so slowly. —ED.

Transfer to Seabee Rating

SIR: I have 17 years in the Navy and hold the rate of BM1 aboard a ship. Is it possible for me to transfer to the Seabees? If so, what channels do I have to go through with my request?—A. F., BM1, USN.

• *First pick the Construction Battalion rating for which you are best qualified and wish to enter. Complete the applicable Navy training course, practical factors and performance tests for the rate, if any, and then submit a request to the Chief of Naval Personnel via your skipper requesting authority to change your rating. BuPers Inst. 1440.5B contains a great deal of information concerning changing of rate. Suggest you get hold of a copy and study it.*

If you choose a CB rating in which you have previous experience it will more than likely increase your chance for advancement to pay grade E-7.—ED.

FLAT HAT PALMA STYLE—Cruisermen enjoy shopping while on cruise in Med.

On an Island in the Med

THE NAVYMAN sails his way to many spots throughout the world and has an opportunity to visit places off the beaten track of the ordinary tourist. Cruisermen of USS *Salem* (CA 139) while in the Med sailed to the island of Mallorca where they stopped at Palma, the capital and largest city of the Balearic Islands. The Balearic group of islands is a Spanish province located about 60 miles off the east coast of Spain.

As the mild climate, palm-fringed Balearics come into view, beauty begins to take shape in the form of terraced, irrigated slopes arranged with olive groves and orchards of figs, lemons, oranges, and almonds.

The Balearic Islands have always been prizes of war because of their key position between North Africa and southern Europe in the western Med. The influence left by the conquering nations upon the architecture of these islands has only added to its photogenic appeal.

After an extensive day of sightseeing, shopping, picture taking, and watching bull fights, the Navy visitors enjoy relaxing with a cool beverage or a meal at one of the many colorful sidewalk cafes of Palma.

A GOOD TIME is had at Palma by Cruisermen sight-seeing and shopping.

These Mark You As Seafaring Men

IF YOU'VE BEEN around the Navy any time at all, you'll have no difficulty recognizing submariners by the two plump dolphins gazing at one another above the wearer's breast pocket.

However, there's many another bit of symbolism adopted by the Navy which can give you a reliable clue as to the wearer's status and occupation. To the uninitiated, mineman and torpedoman might, for example, seem to be very similar but both will be eager to point out the vital distinctions. Nor is it advisable to fail to distinguish between a yeoman and personnel man if either is within hearing distance of your faux pas.

To help guide you through the intricacies of distinguishing marks, collar devices, sleeve marks and specialty marks, you'll find on the following pages a compilation of all such insignia authorized by the Navy as of October 1957.

A brief word as to their significance: The rate (which refers to an individual's pay grade), rating (which describes his occupation), special qualifications, length of service and conduct of an enlisted man can be determined by the sleeve and breast insignia he wears. In addition, brassards may indicate an assignment to a special detail such as shore patrol, recruiting service, ambulance and first aid, or damage control.

Distinguishing marks (shown on pages 32-33), consisting of embroidered devices worn on the right arm, symbolize special qualifications in addition to those required for the various ratings. Twenty-six distinguishing marks are now authorized. Deep Sea Diver has been added since a similar list of distinguishing marks was last presented in the August 1952 issue of ALL HANDS.

Metal or embroidered insignia worn on the left breast also indicate a special qualification or designation. Officers and enlisted men are entitled to wear the following: Naval aviator, aircrew, balloon pilot, parachutist, submarine and submarine combat patrol insignia, and, in addition, officers are eligible for naval aviation observer, flight surgeon, flight nurse, submarine medical and submarine engineering duty insignia.

Ship-name sleeve marks (such as USS *Tang*) are worn on the right sleeve of dress blue and white jumpers by all shipboard enlisted personnel below CPO.

Officer candidates wear shoulder-sleeve insignia bearing the letters OC on the left sleeve just below (one-half inch) the shoulder seam. Reserve officer candidates are designated by the letters ROC.

Commissioned and warrant officers may also be identified by rank (pay grade) as well as line or corps (occupation), by reference to the illustrations on page 32.

An eagle and anchor emblem — forerunner of the rating badge — was the first rating mark. In 1841, boatswain's mates, gunner's mates, carpenter's mates, masters-at-arms, ship's stewards and ship's cooks were authorized to wear this insigne on their right sleeve. The same device was also worn on the left sleeve by quartermasters, quarter gunners, captains of forecastles, captains of tops, captains of after guard, armorers, coopers, ship's corporals and captains of the hold.

In 1866, specialty marks which represented instruments used by the various specialists in performing their tasks were added to the uniform of enlisted personnel. In addition, the eagle and anchor with a star was still worn by all line petty officers and the eagle and anchor without the star was worn by all other petty officers.

In 1886, when rating badges were established, some 15 specialty marks were also provided to cover the various ratings. In 1893, petty officers were reclassified and the rating of chief petty officer was established.

The first of the distinguishing marks as we know them today also appeared in 1886. The seaman gunner's mark — a bursting shell — was authorized to be worn by every enlisted man — regardless of rating, who was also qualified as a seaman gunner. The mark was to be placed upon any other rating badge which a seaman gunner was entitled to wear. If the man was not a petty officer, this mark was to be worn in place of the rating badge.

The seaman gunner's distinguishing mark has lasted through the years and is still included in today's *Uniform Regulations* although the qualifications are not now active.

In time, the distinguishing mark had come to denote a specific qualification in addition to the qualifications required for a specific rating.

Uniform Regulations listed 16 specialty marks for the various ratings in 1905. In addition, five distinguishing marks were authorized: Seaman gunner, gun captain, gun pointer, hospital apprentice and apprentice.

By 1913, the number of distinguishing marks was increased to 13. Included under the heading of distinguishing marks were the "branch mark" — worn by non-petty officers on the shoulder seam of the sleeve of the overshirt and jumper to distinguish men of the seaman branch from men of the artificer branch — and service stripes, worn by "all re-enlisted men."

Distinguishing marks have undergone many changes through the years. It was customary at first, to wear certain distinguishing marks below the rating badge, others on the arm opposite the rating badge and one (apprentice mark) just below the V of the jumper.

From 1865 to 1884 the rating badge was worn on the right sleeve by "line" ratings and on the left sleeve by all others. From 1885 to 1913, petty officers wore their rating badges on the right or left arm depending on which watch they were assigned.

Commencing in 1913 the rating badge was worn on the right sleeve by petty officers of the seaman branch and on the left sleeve by all other petty officers.

Since 1948 all distinguishing marks have been worn on the right sleeve and all rating badges have been worn on the left sleeve.

Only one thing can be certain — the illustrations shown on pages 32 and 33 will, before long, be changed. As the Navy advances, so too, do the Navyman's occupations.

By golly they did change! See below:

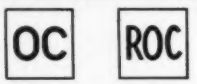
(Other changes made since the Rating Insignia chart, on the next page, went to press: A new General Service rating in Group IX, Photographic Intelligenceman-PT- was established. In the Exclusive Emergency Service ratings, title of Cable Censor-ESX-has been changed to Telecommunications Censorman-ESK.)

U.S. NAVY

COLLAR DEVICES
WARRANT OFFICERS

metal insignia worn on collar

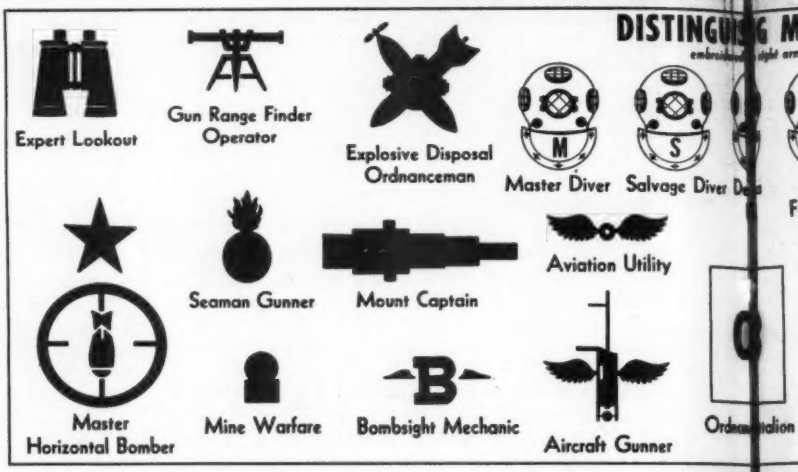
SHOULDER-SLEEVE INSIGNIA



OFFICER CANDIDATE

RESERVE OFFICER CANDIDATE

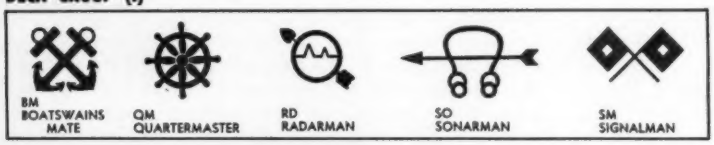
DISTINGUISHING MARKS



BREAST INSIGNIA

SPECIALTY MARKS

DECK GROUP (I)

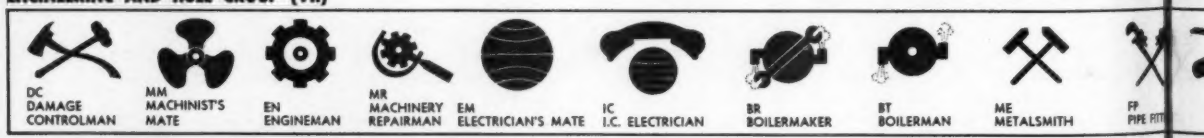


ORDNANCE GROUP (II)

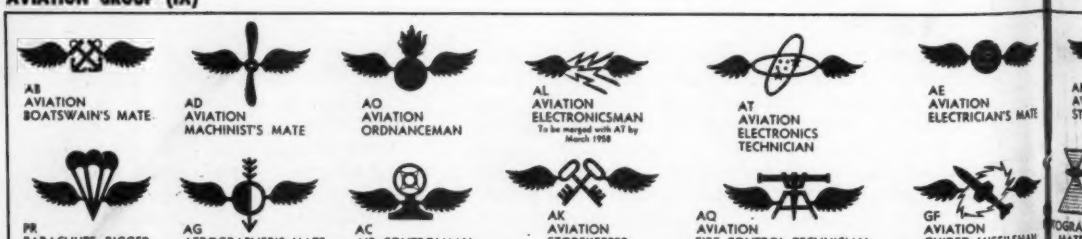
ADMINISTRATIVE AND CLERICAL GROUP (V)

† TE is being disestablished—to be phased out

ENGINEERING AND HULL GROUP (VII)



AVIATION GROUP (IX)



Prepared by ALL HANDS Magazine

VY INSIGNIA

TINGUI G MARKS

ge Diver D

Diver
First Class

Diver
Second Class

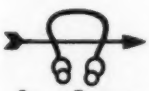
Assault Boat
Coxswain

Fire Control
Radar Operator

Fire Fighter
Assistant

Antiaircraft
Machine Gunner

Advanced
Underseas Weapons Man



Sonar Operator

Gun Director
Pointer and Trainer
and
Gun Pointer
and Trainer

Ordna talion

Airship

Rifle, Carbine and
Pistol Sharpshooter

Navy "E"

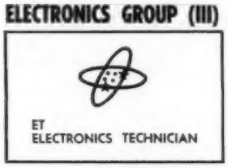
SLEEVE INSIGNIA
COMMISSIONED OFFICERS

BREAST SIGNIA

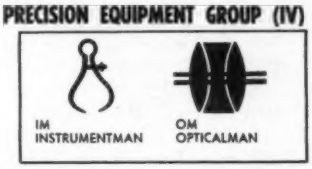
SHIP-NAME SLEEVE MARK

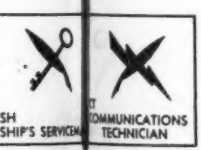
ARKS R ENLISTED RATINGS

ELECTRONICS GROUP (III)

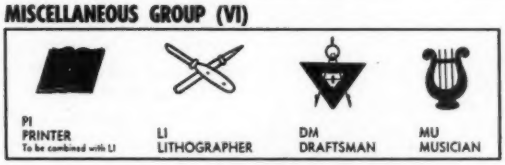


PRECISION EQUIPMENT GROUP (IV)



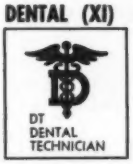


MISCELLANEOUS GROUP (VI)



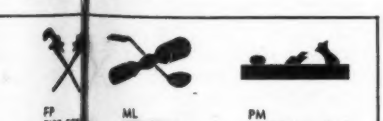
MEDICAL (X)

DENTAL (XI)

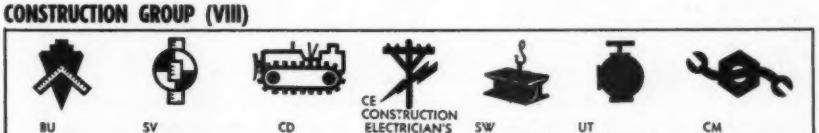


STEWARD (XII)

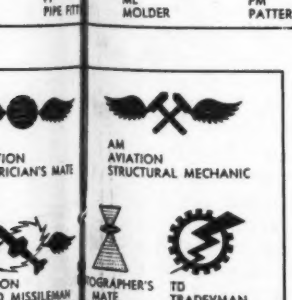
o be phased out over year period



CONSTRUCTION GROUP (VIII)



EXCLUSIVE EMERGENCY SERVICE RATINGS



★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

VERSATILE MISSILE—Knowledge and skill have made *Regulus II*, designed to operate from subs and surface ships, a missile with added punch and power.

Transfer by Highline

USS *Pocono* (AGC 16) may not be a hospital ship, but until one comes along she'll do just fine.

On her way from Norfolk, Va., to Naples, Italy, to participate in NATO exercises the amphibious force flagship went into highline operations twice within a week to bring critically ill Navymen on board for medical treatment.

The first time, Merle Kramer, TM3, was brought on board from USS *Bergall* (SS 320), one of several subs which traveled part of the way with *Pocono*. Kramer was described as having "possible appendicitis," but he recovered and did not require surgery.

On the second occasion the situation was much more serious. The ship's doctor, LT John D. Weresh, was highlined to USS *Melvin R. Nawman* (DE 416) to treat Charles E. Bowen, RD3, who was suffering from a lung condition. When it was found that the patient could be moved, he and Dr. Weresh were highlined to *Pocono*. There, his lung had to be pierced in order to relieve pressure and allow oxygen to fill it. He was then kept under an inhalant until he could be transferred to the Naval Hospital in Naples.

Operation Deep Freeze III

An exodus which started in late August from east and west coast ports involving more than 4000 men embarked in 10 ships and supported by aircraft will continue through early December. These are the men and ships taking part in Operation Deep Freeze III.

The general scope of the operation is to resupply the stations established during Deep Freeze I and II which were set up to support the U. S. National Committee for the International Geophysical Year on the Antarctic continent. Another phase of the annual expedition will be to replace worn-out equipment, perform additional construction, transport the relief IGY scientific and naval support personnel to the Antarctic, and return the relieved personnel to the United States.

The seven U. S. stations in the Antarctic are: Little America, Byrd, Amundsen-Scott South Pole, Ellsworth, Wilkes, Hallet, and Naval Air Facility, McMurdo Sound.

Ships taking part in the operation are: the ice breakers USS *Glacier* (AGB 4), *Burton Island* (AGB 1), *Atka* (AGB 3), and the Coast Guard's USCGC *Westwind* (WAGB 281); cargo ships USNS *Greenville Victory*, *Pvt. John R. Towle*, USS *Arneb* (AKA 56), and *Wyandot* (AKA 92); the tanker USS *Nespelen* (AOG 55) and the escort USS *Brough* (DE 148).

One task group will steam via New Zealand to resupply the Ross Sea, Cape Adare, and Wilkes (Knox Coast) stations. It will arrive at Little America about 1 December; McMurdo Sound, 1 January; Cape Hallett, 15 January; and Knox Coast, 1 February. Another called the Weddell Sea Group, will sail via Dakar and Capetown, South Africa, to the Weddell Sea area, arriving at Ellsworth IGY station about 10 January. There will also be a contingent of 23 Navy planes and an Air Force group of eight *Globemaster* aircraft.

For the second year in a row, *Brough* was the first to get underway. Going *Brough* one better is the man in charge of the operation, RADM George Dufek, USN (Ret.), who will be making his fifth trip to the Antarctic. He was there with Admiral Byrd in 1939, then made his second trip on Operation Highjump in 1947. In the last two operations he was Commander, Task Force 43. He succeeds Admiral Byrd who died earlier this year, as U. S. Antarctic Projects Officer.

Planned operations for Deep Freeze III require an estimated 25,000 tons of cargo and 666,320 gallons of bulk petroleum products to be transported to the Antarctic by ship and plane. This cargo will be either air-dropped or hauled into the different stations by tractor.

YESTERDAY'S NAVY

On 2 Nov 1943 a Japanese naval force was defeated in the Battle of Empress Augusta Bay, Bougainville. On 9 Nov 1880 a two-year, 'round the world cruise was completed by USS *Ticonderoga*, first U. S. steam warship to make such a trip. On 12 Nov 1776 the American ships, *Alfred* and *Providence*, captured a British transport carrying 10,000 uniforms for General Burgoyne's army. On 21-22 Nov 1918 the German High Seas Fleet of World War I surrendered. On 25 Nov 1943 five U. S. DDs defeated an equal force of Japanese DDs in the Battle of Cape St. George.

Some of the vehicles required for unloading ships, clearing snow, erecting bases, and transporting supplies and personnel include D-8 tractors which weigh 35 tons, down to jeep-sized, treaded *Weasels*.

During the first year, with 1805 men taking part, two stations were erected. A 22-building city was erected on the 800-foot-thick ice shelf at Little America, and a 34-house air base was established on lava ash at McMurdo Sound. Five hundred tons of building materials, equipment, and supplies for Byrd IGY Station were cached at Little America. A similar amount was left at McMurdo Sound for building the Byrd and South Pole Stations.

In Deep Freeze II, with 3525 men participating, facilities were added to the existing two bases and five more bases were built. Seven buildings were added to the 22 at Little America and three buildings and a gasoline storage tank were added to existing facilities at McMurdo. IGY stations with barracks, mess-halls, shops, and scientific buildings were constructed at five different locations — Byrd, South Pole, Ellsworth, Wilkes, and Hallett.

Also operating in the Antarctic area in support of the IGY will be units from Argentina, Belgium, Chile, France, Japan, New Zealand, Norway, Union of South Africa, United Kingdom, and the USSR.

Tops in 'Boat Control'

The Pacific Fleet Amphibious Force attack transport USS *George Clymer* (APA 27) has won the coveted "Assault Boat Insigne."

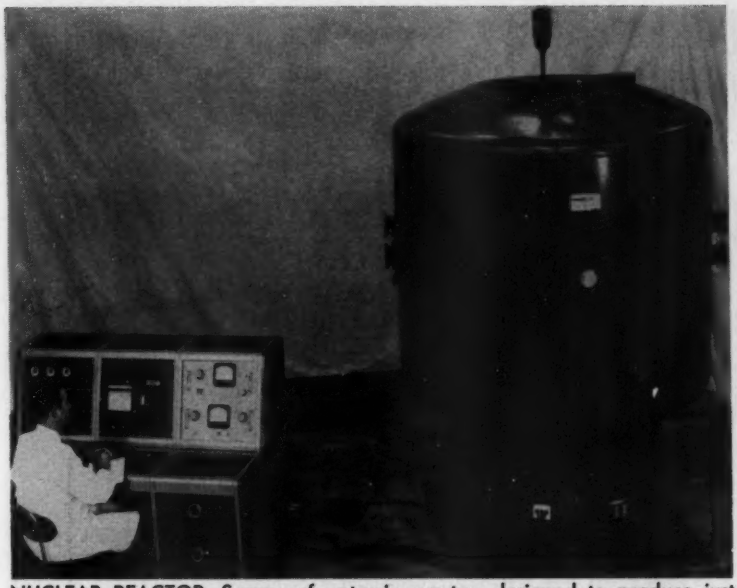
This award is presented to ships attaining a minimum score of 90 in boat control — debarkation and unloading — and beaching tactics during an official amphibious exercise or operation.

Clymer became eligible for the award as a result of operations in the Western Pacific.

The competition for the Assault Boat Insigne is an important phase of PhibPac's annual competitive training program. It is the most highly prized insigne any amphibious ship may earn. The insigne is made up of two crossed anchors with an arrowhead piercing the anchors horizontally at their junction.

It was the combined skill of *Clymer's* assault boat crews and the close teamwork of the attack transport's crew that earned the distinction of winning the coveted award.

A unit of Amphibious Squadron Three, *Clymer* is capable of transporting and landing as many as 1500 assault troops and supplies on a beachhead.



NUCLEAR REACTOR—Super safe atomic reactor, designed to produce just enough power for flashlight bulb, will be used at Naval Post Grad School.

Safe Atomic Reactor

A super-safe atomic reactor, which produces just about enough power to light a flashlight bulb, has been installed at the Naval Postgraduate School, Monterey, Calif. It will be used to supplement the training program in nuclear engineering, nuclear physics and radiochemistry.

The new reactor, which requires less uranium than any other known reactor, is the first of its type—a low-cost, low-power model especially designed with safety in mind. Its core is sealed four times to prevent the escape of radioactive contaminants, and along with the normal interlocks, the core has a built-in thermal fuse. The core is surrounded by an aluminum can, a graphite reflector, a lead shield, a reactor tank and a shield tank.

In operation, the reactor has a power output of 100 milliwatts, which would be about enough to light a flashlight bulb if the reactor were converted to electrical power. However, despite this negligible output, the reactor performs many of the functions of larger types. And, when it is used along with a reactor simulator (analog computer), it will be possible to simulate the operating characteristics of a complete nuclear power plant.

It's No Moonshine

Navymen have always shown considerable interest in the moon and have talked about their moon-light maneuvers—but now they are talking to the moon. (Actually they've been talking to themselves, via the moon.)

Not only have Navy scientists made moon talk, but they say it—the moon—may be used as a radio relay station. This conclusion was reached after six years of experiments.

Regarded as the most significant discovery made by radar, this scientific breakthrough was the climax of a long-range Navy project to study the moon by radar.

Scientists from the Naval Research Laboratory began their current studies of the moon in 1951 when they discovered that, while the moon appears to be rough to the eye, it was comparatively smooth to radar waves, and may be used as a relay station for radio communications. (Other scientists' interest in moon-echoes goes back to the 1920s.)

Continued experiments at various low and high frequencies, including round-trip transmission of voice messages, have confirmed this conclusion, and indicate that communication can be carried on via the moon.

IN THE TOP 100—Joseph L. Galvao, GM1, USN, is one of the top hundred in President's Match, who are entitled to wear President's brassard award.

One of President's One Hundred

For scoring 143 out of a possible 150 with the regulation manually operated service rifle, Joseph L. Galvao, GM1, USN, of NTC Great Lakes, won the coveted Crescent Cup, which is awarded annually to the highest scoring naval officer or enlisted man in the President's Match during the National Rifle and Pistol Matches held at Camp Perry, Ohio.

In addition to receiving the Crescent Cup, Galvao is entitled to wear the President's Match metallic brassard on the left sleeve of his dress blue uniform (see above photo) and undress white "A" until next year's matches. This special brassard is awarded in the name of the President of the United States to the top 100 high-scoring competitors in the annual President's Match.

During this match, Galvao scored five bull's-eyes in registering his 143, just seven points less than a perfect.

Skyhook Balloon Shoots for Sun

A *Skyhook* balloon equipped with an automatic pointing mechanism and telescope-camera equipment has been launched on a trial flight (called Operation Stratoscope) in an attempt to test a new process for taking pictures of the sun. It is expected that the pictures to be obtained by this method will be much sharper than any ever taken of the sun.

After floating for four hours and 15 minutes at a predetermined altitude of 83,100 feet, the special light-sensitive pointing mechanism and photo instruments were parachuted to earth from the balloon.

For this test-flight only a dummy telescope-camera was used. But a working model of the new automatic pointing control mechanism was used to test its functioning in the upper atmosphere. The pointing control is about 12½ feet high, five feet deep, and five feet wide. Inside this frame are a number of highly sensitive instruments, including photo-sensors and mechanical clutches, which guide and aim the telescope-camera at the sun.

Before the development of the Stratoscope technique, photographing the sun through a telescope required the use of mountain top observatories in order to penetrate obstacles formed by the particle-laden atmosphere separating the telescope and outer space. The best way to solve this problem was to carry the telescope above the lower, denser layers of the atmosphere.

In the past, only turbulent eddjes about 600 miles or more in diameter could be distinguished on the sun. The new photographs should reveal the true size of these giant eddies, as well as the smaller, local hot gas

NICE SHOOTING—VADM Holloway congratulates two top Navy marksmen, rifle champ J. L. Galvao, GM1, and national pistol champ W. H. Mellon, AD1.

storms on the sun's surface. In this solar turbulence are found occasional solar flares which result in magnetic disturbances affecting the ionosphere and disrupting long-distance radio communication.

This launching was the first of a series under the project. The next step will be the launching of a balloon outfitted with a solar telescope equipped with a 35-mm. motion picture camera. The camera, photographing through the telescope at an altitude above at least 90 per cent of the earth's atmosphere, will take some 800 pictures of the sun in the three hours it will remain aloft.

Medics of 16 Nations Meet

Medical officers representing the navies of 16 NATO and SEATO nations complete a 60-day medical training program this month in the Naval Medical School at Bethesda, Md.

Thirty naval medical officers participated in the course conducted by the Navy on behalf of the Mutual Security Program. They represented the following countries which accepted invitations to send naval representatives: Norway, Italy, Japan, Korea, Peru, the Philippines, Taiwan, Thailand, Turkey, Cuba, Dominican Republic, Haiti, Vietnam, Chile, Mexico and Germany.

The visiting officers, divided into two groups, studied medical administration and preventive medicine. The studies were designed to develop mutual understanding in matters relating to recent advances in global medicine especially in the field of naval operations.

Field trips to military medical facilities in the Washington, D. C. area and the United Nations and World Health Organization in New York City were included in the program along with visits to the medical department at the Naval Academy; the Naval Medical Field Research Laboratory, Camp Lejeune, N. C.; Naval Hospital, Quantico, Va.; the U. S. Public Health Service Laboratories, Shamblee, Ga.; and the Naval Medical Center at the Pensacola Naval Air Station.

During these trips the training program participants were given an opportunity to visit various historical and cultural centers along the eastern seaboard. They were also given every opportunity to make first-hand contact with the American public.

Vega *Feeds the Fleet Faster with VPC*

The Navy is taking a tip from the banana freighters that ply the tropic routes.

For two years an experiment has been going on aboard refrigerator ship uss *Vega* (AF 59) with the vertical pocket conveyor—the VPC similar to cargo belts used on Caribbean banana freighters. Navy's VPC is not for moving bananas, but for all types of provisions.

Here's how it works: Down in *Vega's* modern reefer holds, sailors load food crates into the free-swinging J-loops of the endless rubberized canvas elevator belt. This hoists provisions topside, where gloved hands shuttle the crates along new skate-roller slides into specially designed nylon tape cargo nets. When a net is full, the boatswain shouts, "Watch your heads!" and the load flies on high-lines to a waiting combat ship.

With VPC, provisions are fed out of the ship's hold at a pace two or three times faster than the estimated breakout rate for conventional handling methods.

Aboard the ship taking on supplies the crates stack up faster than Christmas packages in a post office rush. One hold, equipped with the machine, moved 40 packages a minute, or 58 short tons of provisions in an hour, instead of the usual 15 to 20 tons an hour.

The VPC might well be *Vega's* answer to the need for efficient replenishment at sea. With it, one seven-and-a-half horsepower motor replaces the two 50-horsepower winches needed in the old system. A safety-stop pedal halts the belt with push-button emergency control. The new conveyor reduces the minimum time required to transfer cargo between ships, saves refrigerated air (since storage compartments need not remain open) and makes cargo selectively accessible without a pre-breakout of stores. The former, 24-hour, weather exposure of cargo stacked on deck to await transfer is eliminated.

uss *Vega* is the first ship in the Pacific to experiment successfully with the Navy's banana-belt system, which was developed at the Navy Supply Research Center, Bayonne, N. J. Plans are now being made for the permanent installation of VPCs aboard other refrigerator ships of the Pacific Fleet.

SERVICESCOPE

Brief news items about other branches of the armed services.

★ ★ ★

A NEW GENERAL PURPOSE MACHINE GUN has been adopted to replace the three machine guns now in use by the Army.

The new gun, known as the M-60, weighs 23 pounds as compared to the 32- to 42-pound machine guns. The ability of the M-60 to replace the heavier water-cooled machine gun stems from a barrel and gas system that can be replaced in a matter of seconds. In addition, the M-60 uses a chrome plated stellite-lined barrel that increases its fire power. The gun fires 600 rounds per minute, is 43 inches long, is air-cooled, gas-operated, and is fed by a disintegrating metallic-link belt.

Adoption of this weapon (and the T44 rifle) reduces the family of small arms from seven to two. On the way out are the standard M-1 rifle (Garand); the Browning automatic rifle, known as the BAR; the .30 caliber carbine; the M-3 sub-machine gun; the M1919A4 and M1919A6 air-cooled machine guns; and the water-cooled caliber .30 machine gun.

The new rifle and machine gun fire 7.62mm cartridges which will be common to NATO allies.

Engineering tests have been completed, and additional boats have been procured for troop tests.

★ ★ ★

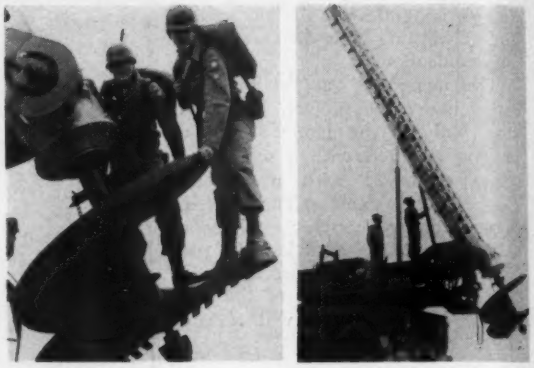
AN IMPROVED VERSION of the *Nike* missile, *Nike Hercules*, is now undergoing its final tests.

Known as *Nike B* during its development stage, the Army's new missile is faster, has a greater range and can carry more destructive power than the earlier *Nike Ajax*, which has guarded key cities and strategic areas of the nation for the past three years.

Although longer, heavier and more than double the diameter of *Nike Ajax*, the *Hercules* model will have extreme maneuverability at altitudes far greater than those which *Ajax* can reach.

Through modifications in existing ground control equipment, *Nike Hercules* can be integrated into existing *Nike* batteries so that both *Nike Ajax* and *Nike Hercules* can be fired with the same system.

The equipment changes also improve *Nike Ajax*.



BIG BORE—Army's new earth auger can dig holes with record-breaking speed for storage and waste disposal.

THE QUARTERMASTER CORPS of the Army has come up with a new design to help their foot soldiers carry a 55-pound load with much more freedom of movement.

It is called the Individual Load Carrying System and involves a specially designed belt and shoulder-padded suspenders. The new equipment will be standard Army issue when stocks of the present strap buckle device for the pack are depleted.

Special bolt-type fasteners increase ease of attaching or removing components from the belt. The suspenders support the weight of the belt, other portions of the pack and a sleeping bag.

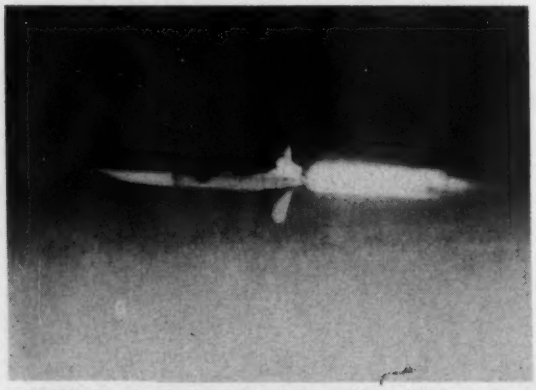
The sleeping bag carrier straps are secured to the front of the suspenders by snap fasteners so that the bag can be released and dropped instantly.

Based on top weight of 55 pounds for marching troops, the load can be divided into three segments:

A 20-pound load consisting of survival items essential to the combat soldier.

A 25-pound battle load of weapons and ammunition.

A 10-pound full field load for protection and comfort such as a sleeping bag, extra clothing and personal gear.



RASCAL, long-range rocket-powered missile, is built to be released in flight, proceed at high speed to target.

AIR FORCE'S new *Thunderchief* F-105 with needle-nose radar unit is latest thing in supersonic fighter-bombers.

PRODUCTION MODELS of the supersonic F-106A, described as the fastest all-weather interceptor ever flown, have been undergoing flight tests at Edwards Air Force Base.

The triangle-winged plane, nicknamed the *Delta Dart*, is the latest in the Air Force's Century Series of fighters. The new plane, equipped with the most advanced electronic fire control system and armament yet developed for an Air Force interceptor is designed to stop possible enemy air attack. Capable of stratospheric altitudes, the F-106A can seek out and destroy enemy aircraft in any kind of weather, day or night.

Like all true delta winged planes, the fighter does not have a horizontal stabilizer. Control is achieved through movable "elevon" surfaces in the trailing edge of the wing. The fuselage is over 70 feet long and bears a close family resemblance to the F-102A now operating with the Air Defense Command squadrons. Both planes feature the gracefully curved wasp-waist to conform to the area rule design first applied to the supersonic F-102A.

The rudder of the *Delta Dart* reaches almost 20 feet above the ground when the plane is resting on its tricycle gear. It is swept back, with a squared-off tip. Clamshell dive brakes are located at the base of the verticle stabilizer and all fuel is carried internally.

A two-place version of the new interceptor, designated the F-106B, is under development. It will carry the same armament and fire control system as the A-model and will differ externally only in the forward section of the fuselage which will have two tandem cockpits.

★ ★ ★

A NEW LIGHTWEIGHT GAS turbine engine, weighing approximately one-tenth as much as industrial diesel or gasoline engines of comparable performance, is now under development by the Army.

The engine, including accessories, weighs only 326 pounds. It is designed to meet the Army's requirement for a prime mover in a lightweight, high-speed, engine-generator set, and other applications where portability is important.

It is capable of producing 286 hp under favorable circumstances and 170 hp under adverse conditions. It is designed for 1000 hours of life between overhauls and maximum ease of maintenance in the field.

IN THE RED—Army men and tanks gain night mobility through infrared sniperscopes and tank searchlights.

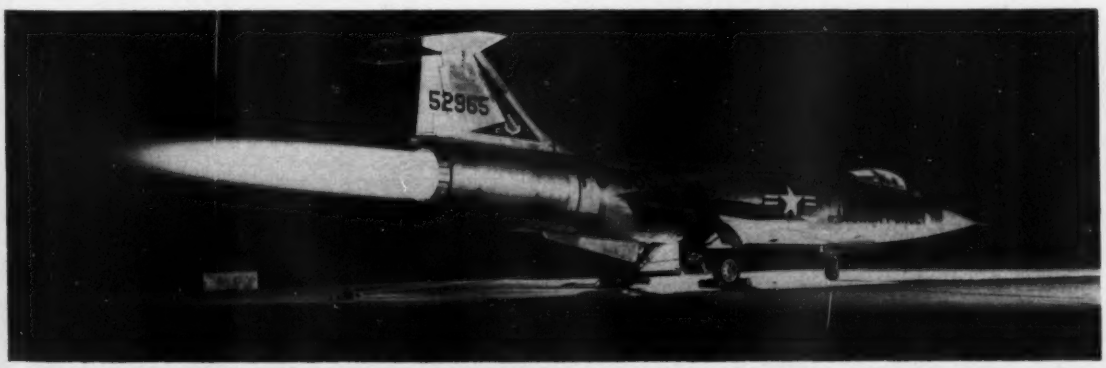
THREE SMALL U.S. COAST GUARD ships have completed the last link in the chain of surveys which has charted an ocean-to-ocean northwest passage for deep-draft ships. The trio—USCGC *Bramble* (WAGL 392), *Spar* (WAGL 403) and *Storis* (WAG 38)—ended their assignment at the western entrance to Bellot Strait.

Separating Somerset Island from Boothia Peninsula in north central Canada, the 12-mile long Arctic waterway borders the northernmost point of land of continental North America.

Lead ship of the Coast Guard trio, *Storis*, reported that the channel located from Shepherd Bay to Bellot Strait is at least 40 feet in depth.

Canadian and Coast Guard ships were assigned to the U.S. Navy's Military Sea Transportation Service, sea-lifting supplies to the Distant Early Warning (DEW) Line of radar stations stretching from Alaska to Baffin Island.

Prediction that Bellot Strait would be the key to a practical deep-draft northwest passage was made last year. An eastern exit has been sought for ships supplying DEW Line sites in the western Arctic. The escape route is required to prevent ships from being locked in the Arctic should the Arctic ice pack block the ships' return to the Pacific.



GLOWING PLACES—Afterburner of Air Force F-104 *Starfighter* lights up the night at Edwards Air Force Base.

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **NAVAL SECURITY GROUP**—Junior officers, including Waves, have an opportunity to submit applications for duty with the Naval Security Group.

Officers ordered to duty with the Naval Security Group will be required to serve a normal tour of duty in the area to which assigned. Billets for this duty are available within the continental U.S., as well as overseas. Preference for duty location will be granted whenever possible following choices indicated on latest Officer Data Card (NavPers 340) submitted.

The nature of this special duty, its specific objectives, methods and results are classified. Therefore personnel assigned must be carefully selected and individually approved.

In order to apply for this duty you must:

• Meet all the requirements for cryptographic clearance as outlined in OpNav Inst. 5510.37A of 7 Oct 1955.

• Demonstrate ability and aptitude in one or more of the following fields: Communications, electrical engineering, electronics, intelligence, languages, mathematics, and physics. You should give details of qualifications in application.)

• Be a LT or LTJG in the Regular Navy, including temporary officers and officers with aviation designators. (LTJGs normally will not be assigned to this duty unless they have completed a minimum of four years' sea duty.)

• Naval Reserve Line Officers in the grade of ensign through lieutenant may apply for assignment providing they agree in their application to remain on active duty for the prescribed length of time. Ensigns must have completed a minimum of one year of sea duty aboard ship before applying.

Restricted line officers of the Regular Navy, primarily limited-duty officers in administration and electronics, are also eligible to apply for this duty.

Requests for duty with the Naval Security Group should be submitted in accordance with BuPers Inst. 1331.2B approximately six months before the end of your current tour of duty. They should be submitted in duplicate, via official channels, to the Chief of Naval Personnel (Attention Pers B1133).

Endorsements should give recommendations regarding any marked aptitudes or abilities noted in the application.

One completed Personal History Statement (DD Form 398) and Fingerprint Card (OPNAV Form 5510-2) shall be forwarded with each application.

• **EARLY SEPARATION**—The program which started 1 Oct 1957, whereby Regular Navy, Fleet Reserve and Naval Reserve personnel are to be separated two months earlier than their normal expiration of active service, will be continued indefinitely. Details of the program are contained in BuPers Inst. 1910.15.

If you desire to ship over, you are exempt from the provisions calling for early separation provided you are fully qualified and recommended for reenlistment. Others not affected by the instruction are those being transferred to the Fleet Reserve or to the Retired List. If you are aboard a ship that is deployed, your commanding officer can delay your early release—but not beyond your EAOS—until the ship returns to the continental U. S.

If you entered the Navy through the Selective Service System, information regarding your early release is covered by other directives.

• **SPECIAL ELECTION IN ILLINOIS**—The 7th Congressional District of Illinois will hold a special election to fill a vacancy in the United States House of Representatives.

Date of the primary election will be 12 Nov 1957. The general election will be 31 Dec 1957. Armed forces personnel have absentee voting privileges (for details, see the June 1956 issue of ALL HANDS, pages 22-25).

• **ASIAN FLU SHOT FOR NAVY PERSONNEL**—The Navy's list of shots or inoculations available to the Navyman has reached a new high with the addition of a mandatory Asian flu shot now being administered to naval personnel.

World-wide distribution of the vaccine for Navymen began in September with operating force personnel scheduled to receive their shots from the first available vaccine. Crew members of ships participating in NATO exercises received their shots in August to combat the possibility of an outbreak of the disease in the cold-weather area in which the exercises were being held.

After all operating force personnel have received their shots the Navy will begin inoculating those attached to non-operating commands. When this is completed and if sufficient vaccine is available, an inoculation program on a voluntary basis will be started for dependents, retired personnel and Red Cross personnel on duty at Naval hospitals. When available the vaccine will also be administered to civilian employees overseas or engaged in care of sick or in auxiliary services in medical

THE BEST CHANNEL for up-to-date information: pass this copy on—there are nine other Navymen on this network.

facilities in the U.S. and for patients when recommended by their medical officer.

It has also been recommended that all prospective MSTS or MATS passengers receive the shots.

Inasmuch as the supply of vaccine immediately available is limited, the Navy will vaccinate intradermally (a method utilizing a smaller dose) enabling a larger number of personnel to be vaccinated, and considered to be equally effective. Later in the fall, when the supply of vaccine will be greater, booster doses will be given which will increase and prolong the protection.

The addition of the mandatory Asian flu shot to the Navy's list makes a total of 10 different inoculations available to the Navyman along with the usual cowpox vaccination. The list of shots includes protective inoculations against smallpox, typhoid, tetanus, diphtheria, yellow fever, typhus, cholera, influenza and polio. The first four are the standard shots given to all personnel and the following three are administered to personnel traveling to certain overseas areas. The last two shots listed along with the Asian flu vaccine are administered to provide protection from the related disease.

• **NAVAL AIR MOBILE TRAINING BILLETS**—Volunteers from five aviation rates are being sought for assignment to the Naval Air Mobile Training Program (NAMT) with headquarters at the NATTC, Memphis, Tenn.

NAMT furnishes field aviation activities with instruction on the latest equipment, practices, procedures and methods in aircraft maintenance and ordnance and munition equipment. The method for applying for duty with the organization is outlined in BuPers Inst. 1306.31B. You must be an E-5 or above in the AD, AO, AE, AM and GF ratings in order to apply.

To volunteer you must be serving on sea duty, including overseas shore duty, and have three years' obligated service upon transfer or agree to extend as necessary. If you have completed 17 and one-half years of active service or more, you must execute an agreement to remain on active duty for a period of 24 months from the date you report for NAMT duty.

In order to fill the instructor billets in the program you must, in addition to being able to speak clearly, work with others under supervision, exercise sound judgment, be military in bearing and show evidence of leadership ability and a desire to serve as an instructor. You must also have a clear disciplinary record throughout your entire naval career.

The required GCT score of 55 may be waived for otherwise qualified candidates upon the recommendation of your commanding officer. Your CO must also consider you a good security risk.

If selected you will be ordered to the NATTC in Memphis for 60 days of temporary instruction before receiving your first permanent assignment in the program. For this reason personnel are advised not to move their dependents until the permanent change of station orders are received.

NAMT duty is classified as shore duty for rotational purposes, but the frequent moves and periods of temporary additional duty which may be incurred require special procedures for the personnel assigned. The normal NAMT tour of three years may be extended to four if you request a one-year extension of shore duty at the end of 30 months of duty. At that time you may also request a one-year extension of shore duty and state four duty preferences or you may ask for a return to sea duty in either Fleet.

Your return to sea duty may also be requested upon completion of 18 months in the program. If approved, orders will be issued returning you to sea when you complete two years of duty.

There is a continuing need for qualified instructor personnel in the NAMT program.

• **RAD PAY FOR RESERVES**—Naval Reservists, recalled retired Fleet Reservists and Fleet Marine Corps Reservists will receive part of the money due them on the day they are released from active duty, and will get the rest later. This change in terminal pay procedure was made known in Alnav 42.

After you have completed your travel time, a check will be mailed to you for your unused leave, MOP, Reserve lump sum readjustment and separation pay.

However, the money you have in Navy savings and the interest it has accumulated, together with mileage, and pay and allowances for advance travel will continue to be made before departing your last duty station.

Since the Marines celebrate their birthday this month, let's salute them. Here are a few questions to see how much you know about the Leathernecks.

1. The Marines observe their birthday on 10 November because the Continental Marines were organized on that date in 1775. The Marine Corps, as we know it today, was permanently established as a part of the Navy by the Act of (a) 4 Jul 1776 (b) 11 Jul 1798 (c) 1 Jan 1868.

2. On the Marine Corps flag pictured here you see an eagle perched on the famed globe and anchor emblem with a streamer in its beak bearing the Marine Corps motto, "Semper Fidelis." It means (a) Always Faithful (b) Always Ready (c) By Sea and Land.

3. Here's a picture of the Commandant of the Marine Corps. He is (a) LTGEN V. E. Megee, USMC (b) GEN Lemuel C. Shepherd, USMC (c) GEN Randolph McC. Pate, USMC.

4. In rank, the Commandant of the Marine Corps is equivalent to (a) Vice Admiral (b) Admiral (c) Fleet Admiral.

5. This is the insigne of the senior enlisted man in the Marine Corps. He draws the pay and allowances of a CPO. He's a (a) First Sergeant (b) Master Sergeant (c) Sergeant Major.

If you are not gung ho! turn to page 47 for the answers.

THE BULLETIN BOARD

Requirements for Navymen Training for Duty in Nuclear Navy

IF YOU'VE READ the nuclear Navy News in this and previous issues, you should be aware that our Navy is fast becoming nucleonic. It offers you unlimited opportunities.

The shipbuilding program for nuclear powered submarines is continuing and the construction of nuclear powered surface units is about to begin. These programs will continue until all our combatant ships are nuclear powered.

To keep stride with this revolution, the Navy has launched an extensive nuclear training program for which you may volunteer for training and duty. (See pages 2, 7 and 32 in the June 1957 issue of ALL HANDS.) This training and duty includes:

- Nuclear powered submarines
- Nuclear powered surface ships
- Army package power reactors

Enlisted men selected for duty in the engineering departments will receive a course of instruction in nucleonics and operational training for approximately one year and qualify as a Reactor Powerplant Operator before being assigned to a nuclear power plant or ship.

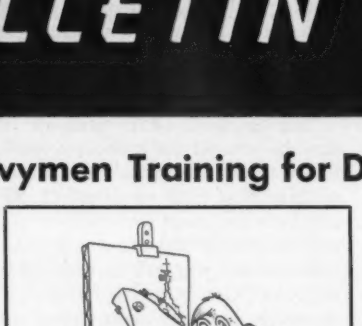
The development of the Army package power reactor has just started, and the Navy is participating in the program.

As stated earlier (SecNav Inst. 1000.3), individuals chosen for these programs will not only be given every opportunity for advancement, but also "will have enhanced their career opportunities."

Here are the eligibility requirements:

Submarine—Regular Navymen in MN, EN, ET, EM and IC ratings in pay grades E-3 through E-7 and HM in E-6 and E-7 only may qualify if they:

- Have a minimum of 40 months' obligated service or are willing to extend.
- Are designated as "qualified in submarines."
- Are physically qualified to meet requirements for submarine duty.



- Volunteer for the program.
- Have a combined ARI/MECH of 105.

Surface—Regular Navymen of the HM rating in pay grades E-6 and E-7, or of MN, BT, FP, MR, ET, IC, EM and EN ratings in pay grades E-3 through E-7, may qualify if they:

- Are no more than 30 years of age.
- Are volunteers for the program.
- Have a minimum test score in GCT, ARI and MAT/MECH of 55 each.
- Are high school graduates or GED equivalent.
- Are recommended by their commanding officers.
- Have a minimum of four years' obligated service, or be willing to extend their enlistment, or reenlist at time of reporting for instruction.

If qualified for nuclear powered subs, you may submit your request on the Enlisted Evaluation Report, (NavPers Form 1339) via your commanding officer, to the Chief of Naval Personnel (Attn: Pers B2131). Requests received will be reviewed and will be acknowledged as to the action taken.

It is estimated that approximately 150 men will be required for the nuclear surface ship program during 1958. Owing to this limited number, and in order to prevent long waiting periods for entry into this program, individual requests from surface ship personnel are not desired at this time. Current needs will be filled by personnel already on the waiting list. As requirements increase, applications from individual personnel on both shore and sea duty will be requested by a Bureau directive.

Training for submarine personnel is divided into two phases: basic and operational. The basic nuclear power course is conducted at the Naval Submarine School, New London, Conn., and is 21 weeks long.

Here, you receive a broad academic background in subjects related to the nuclear field and a knowledge of nuclear power plant construction, instrumentation, designed operation, and mechanical and electrical components.

The operational phase of the nuclear power submarine course is conducted at the AEC's prototypes in Idaho Falls, Idaho, and Schenectady, N. Y. This phase of the course is approximately 24 weeks long.

During this period, you apply the knowledge received in the basic course and, by practical operating experience, qualify for the duties to which you will be assigned. Your ultimate duty assignment determines which course you will attend.

Commencing in January 1958, basic surface and submarine classes for enlisted personnel will convene quarterly in January, April, July and October. All classes for officers will continue to convene semiannually in January and July. The first Army Package Power course is scheduled to convene in January 1958.

Training for surface ship personnel also is divided into basic and operational phases.

Both the basic and operational courses for nuclear surface unit trainees will be held at Idaho Falls, with instruction provided by contract engineers and naval personnel of the staff of the Naval Nuclear Power Training Unit. The scope of the instruction is the same as that for submarine personnel.

Training for Army Package Power Reactors will follow lines similar to

those described above. This training is conducted by the Army under the auspices of the Atomic Energy Commission. Limited numbers of Construction Group VIII personnel will be ordered to training duty with the U.S. Army at Fort Belvoir, Virginia, for basic and operational instruction on the first nuclear package powerplant.

Each course will offer approximately six months of basic academic training followed by approximately six months of operational and maintenance training in the land based prototypes.

Certain qualified men, primarily in the EN, EM and FP ratings, will also receive highly specialized stainless steel welding training.

Complete details, including recommended study texts and courses, may be found in BuPers Inst. 1540.33A. The instruction also notes that experience to date has shown that a high GCT is not necessarily the most important requirement—it is the sincere desire to absorb the necessary fundamentals, the adaptability to new concepts of nuclear power, and the willingness to work that will insure success.

Cold Weather Medicine Course for Doctors, Corpsmen

The Medical Department correspondence course, *Frigid Zone Medical and Dental Practice* (NavPers 10997), has been completely revised and reissued under the title, *Low Temperature Sanitation and Cold Weather Medicine* (NavPers 10997-A), which is now available to Regular and Reserve officers and enlisted personnel of the Medical Department.

Included in the course is discussion of problems of water supply, sewage disposal and garbage disposal in cold climates; also cold weather medicine practice relating to cold injury, snow blindness, carbon monoxide poisoning, psychological problems and dentistry.

This course consists of three assignments, evaluated at nine points credit for purposes of Naval Reserve retirement and promotion.

Medical Department Reservists who previously completed NavPers 10997 will receive additional credit for NavPers 10997-A.

WHAT'S IN A NAME

"Fighting Fletcher"

This year, at Sasebo, Japan, USS *Fletcher* (DDE 445) took time out from her busy schedule with the 7th Fleet in the Far East to celebrate an occasion that meant a lot not only to *Fletcher*, but also to the entire Navy.

It was the 15th anniversary of *Fletcher's* commissioning and at the same time the 15th anniversary of some of the fightingest ships to come out of World War II — the *Fletcher* Class destroyers.

***Fletcher* was commissioned on 30 Jun 1942 at Kearny, N. J., but her history goes back a long time before that. She was authorized by Congress in 1934 and designed in the late '30s. Her keel was laid in October 1941 and she was launched seven months later.**

The sleek, new *Fletcher* Class ships, with torpedoes and five 5-inch guns, were destined to play a major part in rolling back the Japanese. Before the war was over, 175 of them had been launched, making them the largest class of DDs in the Navy. Nineteen of them went down in combat and another six were severely damaged, which gives a pretty good indication of the kind of action these ships saw.

The *"Fighting Fletcher"* received her share of war, too. Heading for the South Pacific in August 1942, she first drew blood by shooting down an enemy plane on 11 November off Guadalcanal. The next day five more enemy aircraft fell before her guns and on the night of November 13 — Friday the 13th — she took part in a free-for-all battle (Battle of Savo Island) at close range, described by Fleet Admiral King as one of the most furious sea battles in history. Tactics, formation and concerted action gave way to general melee as enemy and American forces plunged into each other's formations in the dead of night.

Out of this action only *Fletcher* emerged unscarred. Of the 13 American ships in the fight, six were sunk and six damaged. Among the enemy's losses was a large cruiser credited to the torpedoes of *Fletcher*.

In the nerve-wearing weeks following this battle each side strove to reinforce. For those ships which could steam and fight the load was heavy. *Fletcher* was one of them. On the night of 30 Nov 1942 she fought in the battle of Tassafaronga, where U. S. forces suffered heavy losses, but again she came through unscathed. On 11 Feb 1943, off Guadalcanal, she found and sank her first enemy submarine.

From Guadalcanal, *Fletcher* moved on to support the island-hopping campaigns in

the Gilberts and Marshalls until finally, in December 1943, she steamed to San Francisco, Calif., for a well-earned rest and overhaul.

By February 1944 *Fletcher* was back on the job, sailing from San Francisco to the Marshalls and on to New Guinea, where she chased and damaged a Japanese DD in a running gun battle. She then moved to the Philippines, where she proved she could take it as well as dish it out.

On 14 Feb 1945, while she was steaming off Corregidor, a 6-inch shell from a hidden Japanese shore battery exploded as it ripped through her main deck, putting both forward guns out of action. Six men were killed instantly and fire broke out in No. 1 gun magazine.

The ship was in mortal danger when Elmer C. Bigelow, WT1, USN, picked up a pair of fire extinguishers and plunged into the burning compartment without wasting precious time to put on rescue-breathing apparatus. Despite the acrid smoke which seared his lungs so badly that he died the next day, he quickly extinguished the fires and prevented a magazine explosion . . . which undoubtedly, would have left his ship at the mercy of Japanese guns on Corregidor. For his heroism he was posthumously awarded the Medal of Honor. (A new destroyer, USS *Bigelow* (DD 942) now bears his name.)

When the war ended *Fletcher* had amassed 15 battle stars.

After the war larger, more powerful DDs began taking over the duties that she and her sister ships had performed so long and so well. In 1949 she was converted to a DDE, a new type of anti-submarine destroyer.

In that capacity, while earning five more battle stars in the Korean war, she proved once again that *Fletcher* is still a ship with a lot of class.

Are You in Seavey Segment I? Check Your Shore Duty Status

SEAVEY SEGMENT ONE, which becomes effective on 1 Feb 1958, will result in longer tours of normal shore duty for some of the top three grade petty officers in 17 different ratings.

Under Seavey, CPOs and first and second class petty officers in the YN, PN, and JO ratings will have 42 months of shore duty. Under the old plan they were ordered ashore for periods of three years. Increased to 30-month normal tours are BMC, QMC, SMC, RDC, SOC, TMC, MNC, MN1, MN2, GSC, GS1, GS2, ETC, ET1, ET2, IMC, OMC, SKC, DKC, DK1, DMC, DM1, and DM2. Petty officers in these ratings were formerly given 24 months of shore duty. Tours for telemen with yeoman NECs will be the same as yeomen of the same pay grade.

We'll Miss the Pitter Patter — Bainbridge's Refrain

The old "Hup, Toop, Treep, . . ." accompanied by the sound of marching feet is beginning to leave hollow echoes at the Bainbridge Naval Training Center.

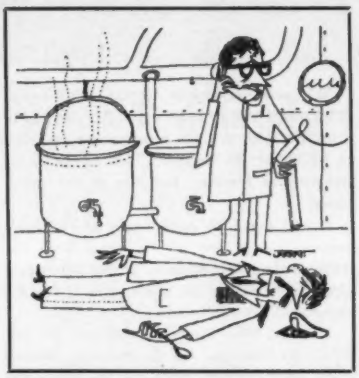
On 1 September the Center discontinued taking men recruits. By the first of next year, the Recruit Training and Administrative Commands at Bainbridge will close. It will mean a reduction in station military personnel from about 12,000 to approximately 4500.

Recruit training for women and the Service Schools Command at Bainbridge will not be affected.

Recruits undergoing training at the Center will continue until graduated. But since 1 September, all new recruits are receiving their training at either Great Lakes, Ill., or San Diego, Calif.

From the time the Center opened 11 Oct 1942 until the conclusion of hostilities on V-J Day, 14 Aug 1945, 244,277 recruits were trained.

On 30 Jun 1947 the Training Center was deactivated but, owing to the Korean crisis, it was reactivated 1 Feb 1951. From that time until the closing this year, more than 300,000 recruits received training there.



"Better cancel the rest of that mushroom soup, Sam."

The increases were made to insure maximum stability in operating units and yet maintain equitable rotation of personnel. However, your tour of shore duty will not be extended to a date beyond your current expiration of enlistment unless you agree to extend. After 15 Oct 1957 you must execute the extension agreement at least seven months before your active obligated service ends. After that point the tour completion date cannot be changed.

The new shore duty tours will apply only to personnel whose current tours expire on or after 1 May 1958. Tours are not increased for people who have never been to sea.

Personnel in 21 different rates will receive Segment One rotation data cards about 1 Nov 1957. However, shore duty orders under the old seashore rotation plan will continue to be issued until 15 Jan 1958 from the present waiting list.

If you are serving on overseas shore duty, or in a non-rotated unit and your tour of duty expires later than 15 months after the effective date of your Seavey Segment, you will not receive a rotation data card. Navymen serving on overseas shore duty whose tour expires after 1 May 1959 will receive their rotation data card in November 1958, provided their tour overseas expires before 1 May 1960.

According to BuPers Notice 1306, 5 Sep 1957, which outlines the new shore duty tours and Seavey Segment One procedures, rotation data cards will be mailed on 15 October for personnel in the following rates whose sea tours began in the month and year shown or earlier:

BMC . . . Dec. 1955	SN . . . Dec. 1955
BM1 . . . Dec. 1954	IMC . . . Apr. 1956
BM2 . . . Dec. 1951	IM1 . . . . Feb. 1956
BM3,	IM2 . . . Dec. 1954
SN . . . Jun. 1951	IM3,
QMC . . Apr. 1956	SN . . . Sep. 1954
QM1 . . Sep. 1954	OMC . . Nov. 1955
QM2,	OM1, 2,3,
3, SN . Apr. 1954	SN . . . Sep. 1954
SMC . . . Feb. 1956	*RMC . Nov. 1955
SM1 . . . Apr. 1954	*RM1, 2, 3,
SM2,	SN . . . Jun. 1955
3, SN . Dec. 1952	**YNC,
RDC . . . Oct. 1955	1 . . . . Oct. 1956
RD1, 2, 3,	**YN2, 3,
SN . . . Sep. 1954	SN . . . Apr. 1956
SOC . . . Oct. 1955	PNC, 1 . Oct. 1956
SO1, 2, 3,	PN2, 3,
SN . . . Jan. 1955	SN . . . Apr. 1956
TMC . . . Apr. 1956	SKC, 1, 2, 3,
TM1 . . . May 1954	SN . . . Apr. 1956
TM2, 3,	DKC, 1 . Oct. 1956
SN . . . Oct. 1953	DK2, 3,
MNC, 1, 2, 3,	SN . . . Feb. 1955
SN . . . Apr. 1956	JOC, 1,
GMC . . Dec. 1955	2 . . . . Oct. 1956
GM1 . . . Sep. 1953	JO3,
GM2, 3,	SN . . . Apr. 1956
SN . . . Jun. 1952	LIC . . . . Apr. 1956
FTC . . . Mar. 1956	LI1 . . . . Nov. 1955
FT1, 2, 3,	LI2, 3,
SN . . . Nov. 1954	SN . . . Jan. 1955
GSC, 1, 2, 3,	DMC, 1,
SN . . . Apr. 1956	2 . . . . Oct. 1956
ETC . . . Apr. 1956	DM3,
ET1, 2, 3,	SN . . . Apr. 1956

*Including TE with RM NECs
**Including TE with YN NECs

All rotation data cards must be returned to the reporting PAMIs. If cards are not received for eligible personnel, the required information should be sent to the PAMI in a typewritten list or on blank cards which are provided. The lack of obligated service does not make a man ineligible for entry on the Seavey.

All personnel whose sea tour commencement date is in or before the month indicated above will be entered on the Seavey regardless of whether a rotation data card is returned on not. The PAMIs will inform commands of the duty preferences on file in the Bureau of Naval Personnel.

For a detailed explanation of both the Seavey and Shorvey programs, see the January 1957 issue of ALL HANDS, pages 28-49. This issue also shows how to fill your Seavey and Shorvey Rotation Data Cards.

NOW HERE'S THIS

New Destructor

When USS *Fred T. (for Thomas) Berry* (DDE 858) makes a good will visit she really does the job up right. LT Efren Villegas of the Armada Republica Argentina attests to that, and his new born son is named after the DDE.

The Argentine Navy lieutenant was assigned to *Berry* as liaison officer during the DDE's visit to that country. He quickly made friends with officers and crew on board the "destructor" and, before long, the U. S. Navymen were bombarding him with quips about the imminent arrival of an offspring.

Villegas was so favorably impressed by the Navymen that when his baby was born he decided to name the boy Federico Tomas (the Spanish version of Fred Thomas) in honor of his many friends on board the American ship. He telegraphed the news to *Berry* and she responded with a telegraph reading:

"CONGRATULATIONS ON LAUNCHING OF FEDERICO TOMAS, A.R.A. X ALL BERRYMEN SEND WARMEST REGARDS TO NEWEST DESTRUCTOR."

List of New Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in September.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

The Spirit of St. Louis (884) (C) (WS): Drama; James Stewart, Murray Hamilton.

Affair in Reno (885) (WS): Drama; John Lund, Doris Singleton.

Calypso Joe (886): Musical; Herb Jeffries, Laurie Mitchell.

Tarzan and the Lost Safari (887) (C); Drama; Gordon Scott, Robert Beatty.

The D.I. (888): Drama; Jack Webb, Jackie Loughery.

Dragoon Wells Massacre (889) (C) (WS): Adventure Drama; Barry Sullivan, Mona Freeman.

Kronos (890) (WS): Science-Fiction; Barbara Lawrence, John Emery.

Untamed Youth (891): Drama; Mamie Van Doren, Lori Nelson.

The Restless Breed (892) (C): Drama; Scott Brady, Anne Bancroft.

Garment Jungle (893): Drama; Lee J. Cobb, Richard Boone.

The Seventh Sin (894) (WS): Drama; Eleanor Parker, Bill Travers.

The Wayward Bus (895) (WS): Drama; Jayne Mansfield, Dan Dailey.

True Story of Jesse James (896) (C) (WS); Adventure-Drama; Robert Wagner, Jeffrey Hunter.

Enemy from Space (897): Science-Fiction; Brian Donlevy, John Longdon.

A Face in the Crowd (898): Drama; Andy Griffith, Patricia Neal.

Ten Thousand Bedrooms (899) (C) (WS): Musical; Dean Martin, Eva Bartok.

The Way to the Gold (900) (WS): Adventure Drama; Jeffrey Hunter, Sheree North.

The Midnight Story (901) (WS): Drama; Tony Curtis, Marisa Pavan.

Beau James (902) (C): Drama; Bob Hope, Vera Miles.

Calypso Heatwave (903): Musical; Johnny Desmond, The Treniers.

Naval Reactor Program Report Is Available from GPO

If you would like a first hand report on the nuclear Navy, you'll find some interesting reading in the hearings on the Naval Reactor Program conducted by the Joint Congressional Committee on Atomic Energy.

This detailed "inside" report—one of the most comprehensive published to date—contains testimony by RADM Hyman G. Rickover, USN, Chief, Naval Reactors Branch, Atomic Energy Commission, and Assistant Chief of the Bureau of Ships for Nuclear Propulsion; and other experts in the field of nuclear power.

The report of the Congressional hearings is published in a 100-page pamphlet entitled *"Naval Reactor Program and Shippingport Project."* It can be purchased for 30¢ from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.

HERE'S YOUR NAVY

To the 18 men at the Antarctic South Pole Station on the exact geographical bottom of the world, record low temperatures, sometimes dropping to minus 100 degrees Fahrenheit, pose many unusual problems. Of the 18 men, nine are Navymen performing logistics jobs and nine are civilians working on the International Geophysical Year (IGY) program.

They have crowded, warm headquarters in the station messhall where most of the weather observations are made automatically. But every three hours one of them makes a 100-yard trek into the Antarctic night to check

temperatures and make sure that automatic equipment is working satisfactorily. And every 12 hours a hydrogen-filled weather balloon is launched from an inflating shelter at the far end of the camp in an attempt to record upper air temperatures, wind, etc.

One of the men makes this sub-zero walk to the shelter an hour or so before the "black noon" or equally "black midnight." His first task is to light off the gas engine heater, located outside the inflation shelter to prevent hydrogen explosions.

Next, the weatherman approaches the gas generator which resembles a vertical steam boiler. A mixture of 10 gallons of water, some caustic soda, and the addition of aluminum chips complete the gas making process. After much valve manipulation the balloon begins to fill the room.

Problems don't stop here. The balloon, dangling a radio transmitter by a piece of line, is released through eight-by-eight-foot trap doors in the roof. In spite of a plywood windbreak, it is not uncommon for the high Antarctic winds to rip the balloon to shreds as it clears the roof.

Once the balloon is safely in the air, weather information is telemetered to the weatherman snug once again in his headquarters in the messhall.

Here Are Ground Rules for Appointment as a Naval Officer

WANT TO MAKE officer status? Here are the ground rules. They describe the eligibility requirements for USN men and women who want to move up the ladder to a commissioned status in the Regular Navy through the Integration Program, LDO program, and the Warrant Officer program.

Appointments under the Integration and LDO programs are limited to line codes 1100, Supply Corps (code 3100), and Civil Engineer Corps (5100). Personnel appointed 1100 who apply for and complete flight training will be redesignated (1310). Appointment under the Warrant Officer program will be for the performance of duty in the technical field indicated by your rating.

You must agree (if eligible) that you will not apply for voluntary retirement before completing three years' service as a warrant officer.

Temporary LDOs will become eligible for permanent status when promoted to LTJG and remain eligible through the grade of LT. If you don't augment to permanent officer status, and so long as you serve satisfactorily and the needs of the service dictate, you may expect to remain in a commissioned status as temporary LDO at least until eligible for retirement. This will be in the grade you are serving at the time. But if you twice fail to be selected for promotion, you will be reverted to the status held at the time of selection to temporary LDO.

No matter which of the programs you apply for, you must meet physical requirements of the grade for which considered as established by the Chief, Bureau of Medicine and Surgery. Your transcript of service will be computed to 1 April of the calendar year in which your appointment could first be made. You must be on active duty at the time your application is considered by a selection board and remain on active duty until your appointment can be tendered. For the two years before the application is dated, you must have no record of conviction by a general, special or summary court martial, or conviction by civil court for any offense other than minor traffic violation.

Other eligibility requirements for the three programs are:

• ***Integration Program***—All service must be continuous in the Regular Navy and cover the period immediately before submission of application. Naval Reserve time is not acceptable. You must have at least one year of obligated enlisted service remaining upon entering the program or voluntarily extend for a year. Men must be at least 19 and under 32½ on 1 July of the calendar year in which the appointment can be made. On the same eligibility date required of men, women must be at least 21 and under 29½.

The program is open to CWOs, WOs, enlisted men and women. They must have three years in grade in either of these combined grades or rates. However, for CPOs, they can take this option or else they, and those enlisted below CPO, must have four years' service.

With the exception of appointment to CEC, all must successfully have completed 30 semester hours of work at an accredited college or university or have the service accepted equivalent as defined in *BuPers Manual*, Article D2103(14), or be a high school graduate or service-accepted equivalent with GCT or ARI score of 60 or above. CEC applicants must

HOW DID IT START

Early Ideas in Mothballing

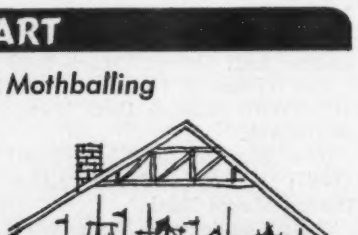
On 3 Mar 1801, the day before Thomas Jefferson was to become President, the Naval Peace Establishment Act was approved by Congress. It asked that, out of a total of over 30 vessels in service, 13 of the largest be retained and the rest sold. Of the 13 frigates to be kept on the Navy list, six were to "be kept in constant service in time of peace." The rest might be laid up "in ordinary." It was up to Mr. Jefferson to take care of this latter proviso.

The President had never heard of mothballing, but he did have a plan to preserve the ships. He suggested that the seven frigates not on active service be stored in the Washington Navy Yard, high and dry, under a great curving iron roof, safe from the elements. He figured that by doing this, the ships would be as sound at the beginning of another war as they were when they were laid up. If the ships were out of the water and covered with a roof, "they would last as long as the interior timbers, doors and floors of a house."

He had a precedent. A rear admiral of the Swedish Navy had reported that his country was planning to build a dock to contain eight ships of the line, in order to preserve them. The ships were to be washed throughout with fresh water, perfectly drained and open to circulation of air.

President Jefferson's dock would be large enough to hold 12 *Constitution* class frigates, three abreast. It would be about 175 feet wide and 800 feet long, with three acres of roofed-over drydock.

Further details of the plan called for the erection of two locks, each with a lift of 12 feet. Depth of the lower lock would admit a frigate of 23-foot draft. When



the outer gate was closed, the water level in the lower dock would be raised 12 feet; the upper gate would then be opened and the ship would be worked into the second lock. After the second 12-foot lift the ship could be admitted into the large basin with the rest of the vessels to be preserved and the water drained away. The keel blocks in the upper basin would be one foot above high water in the river.

There were, however, a few complications. The bottom of the Eastern Branch (Anacostia River) was muddy and not a very promising foundation for the first lock. In another area gravel was located for this foundation but it would require $10,000 for piling in the river.

After a period of brisk discussion, the drydock project was referred to a committee appointed "to inquire into the usefulness and property of constructing a dock or docks." The project died, and the first U. S. venture in mothballing ended.

have completed three years of college credits toward an engineering degree at an accredited engineering school.

• ***LDO Program***—Open only to male PO1s and above and temporary or former temporary commissioned officers who have completed 10 years' active naval service, including Marine Corps and U.S. Coast Guard (when operating as part of the Navy). All service must be exclusive of training duty in the Naval, Marine Corps, or Coast Guard Reserve.

You must not have reached your 35th birthday as of 1 July of the year in which the appointment can first be made. But for individuals who are serving in a temporary commission of LTJG or above, or who have previously served in a temporary commission of LTJG or above, the age limit is raised to 38. PO1s must have served one year in rate at the time of application. All applicants must be high school graduates or have the service-accepted equivalent.

• ***Warrant Officer (W-1)***—Open to enlisted men and women serving on active duty as CPO or PO1 in the Regular Navy. Must have completed six years of active naval service, including Marine Corps, and U.S. Coast Guard (when operating as part of the Navy). All service must be exclusive of training duty in the Naval, Marine Corps or Coast Guard Reserve. There are two age requirements:

1. Those who originally enlisted in the Navy, Naval Reserve, or Coast Guard (when operating under the Navy) before 15 Sep 1945, must not have reached their 39th birthday as of 1 July of the year following that in which application is made.

2. Those who originally enlisted after 15 Sep 1945, must not have attained their 34th birthday as of 1 July of the year following that in which application is made.

There are no special requirements regarding education.

Examinations

Examinations for all three programs will be held annually on 15 June or the next regular working day. They will consist of: general aptitude; military knowledge; and General Educational Level Determination composed of history, science, mathematics and English.

The Chief of Naval Personnel will establish a cutting score; all above it will be presented to a formal selection board convened by SecNav. Those below the cutting score will be considered disqualified. Eligible applicants will be considered annually in February. Results of the selection board's action will be promulgated by a BuPers Notice.

It is anticipated that it will take about 15 months from the date of initial application to process and appoint selected applicants. Warrant appointments will be issued according to the needs of the service.

Complete details on all three of these programs, including how to submit your application and what to put in it, can be found in BuPers Inst. 1120.18D.

Revised Flight Training Program Includes Changes In Obliserv Requirements

A program to phase out the early commissioning of Naval Aviation Cadets undergoing training, and the early designation of officer trainees as naval aviators by 30 Jun 1958, has been instituted by the Navy.

Formerly, NavCads received their commissions and naval aviator designators upon completing 10 weeks of advanced training. Under the new program the NavCads will be required to complete the entire advanced training program before becoming ensign USNR or second lieutenant USMCR aviators.

Officer students undergoing flight training will also be required to complete the advanced syllabus before having their designator changed to that of naval aviator.

This new policy is designed to permit the Navy's air arm to operate within current budgetary and manpower limitations. The program is being introduced gradually.

In order to receive his appointment to the grade of ensign USNR, or second lieutenant USMCR, a NavCad must have successfully completed the prescribed course of instruction in the advanced flight training syllabus and accumulated at least 200 hours of pilot time, 75 of which is solo or first pilot time.

In another move designed to strengthen the naval air arm under current limitations the obligated service requirements for certain graduates of flight training programs has been extended. All students except NavCads and Marine Corps personnel entering pre-flight, or already enrolled in the pre-flight or basic phase of flight training, will be asked to sign three and one-half year obligated duty agreements.

If the student does not elect to execute the agreement the following disposition of students in various categories will be made:

• NROTC (Regular) will be dropped from flight training and serve the remainder of their three year educational obligation as line officers.

• NROTC (Contract) will be dropped from flight training and serve the remainder of their two year obligation as line officers.

• ROC and OCS will be dropped from flight training and serve the remainder of their three year obligation as line officers.

• AOC (1395) will be dropped from flight training, designated 1355 officers and released from active duty upon completion of six months' active duty.

Marine Corps flight students will be covered by instructions to be issued by the Commandant of the Marine Corps. NavCads will continue to serve a total of four years from the date they report for training, but the Navy is seeking a change in the Public Law to increase the required service of NavCads.

This increase in active service time required following flight training will ease the load on the training "pipeline" and reduce the requirements for instructors. The Navy will also be able to increase the experience level of aviation officers.

Flight students not sufficiently motivated to serve three and one-half years of active commissioned service will be dropped from flight training making possible the retention of many senior USN(T) and USNR officers who might otherwise be scheduled for release.

QUIZ AWEIGH ANSWERS

Quiz Aweigh is on page 41

1. (b) 11 Jul 1798.
2. (a) Always Faithful.
3. (c) GEN Randolph McC. Pate, USMC.
4. (b) Admiral.
5. (c) Sergeant Major.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 37—Directed attention of all Naval and Marine Corps personnel to the President's People-to-People program.

No. 38 — Stated that Navy and Marine Corps enlisted personnel, under certain conditions, may make a reelection of the type of bonus to be paid upon reenlistment if submitted before 4 Oct 1957.

No. 39 — Outlined schedule of priorities of immunization against Asian influenza for naval personnel, their dependents and certain other personnel.

No. 40 — Announced the convening of selection boards to recommend staff corps officers on active duty (except TARs) for temporary promotion to captain and commander.

No. 41 — Announced approval by the President of the reports of selection boards which recommended USN and USNR male officers for temporary promotion to grade of commander and USN women officers for permanent promotion to grade of commander.

No. 42 — Orders disbursing officers to discontinue making certain payments to Reservists upon release from active duty. Payments are to to be made by mail upon expiration of travel time.

No. 43 — Announced approval of the report of a selection board which recommended officers for temporary promotion to grade of brigadier general in the Regular Marine Corps.

No. 44 — Announced approval of the report of a selection board

which recommended officers of Regular Marine Corps and Marine Corps Reserve for temporary promotion to grade of major.

No. 45 — Contained certain instructions for disbursing officers afloat.

No. 46 — Announced the convening of selection boards to recommend line officers on active duty (except TARs) for temporary promotion to the grades of lieutenant commander and lieutenant.

Instructions

No. 1050.2B — Provides information concerning the conditions under which enlisted personnel of Philippine or Guamanian extraction may be transferred to Guam or the Philippines for reassignment or visit those areas in a leave status.

No. 1120.15C — Outlines eligibilitiy requirements and processing procedures whereby qualified personnel may seek appointment to the grade of ensign (2300) in the Medical Corps, USN.

No. 1133.10A — Announces instructions regarding the reenlistment, extension of enlistment and voluntary retention on active duty of USNR enlisted personnel serving on active duty.

No. 1306.31B — Discusses the policy and procedures for the assignment and rotation of enlisted personnel to and from the Naval Air Mobile Training Program.

No. 1500.39 — Announces a revised issue of the *Catalog of U. S. Naval Training Activities and Courses* and provides instructions for its use.

No. 1540.33A—Provides information concerning the Navy Nuclear Power Training Program and tells how to apply for training.

No. 1910.15 — Directs the early separation of enlisted personnel serving on active duty.

No. 1920.8 — Outlines the procedures for appointment of commissioned or warrant officers resigning from the Regular Navy to commissioned or warrant grade in the Naval Reserve.

No. 5570.1A — Provides for safeguarding unclassified personnel test materials, which require protection as official Navy Department information.

Notices

No. 1120 (20 August) — Announced changes to the obligated service requirements for graduates of flight training programs.

No. 1331 (4 September) — Announced that applications from junior officers (including Waves) are desired for a tour of duty with the Naval Security Group.

No. 1742 (5 September) — Announced forthcoming special election in the State of Illinois.

No. 1306 (5 September) — Established the sea tour commencement dates for enlisted personnel to be placed on Seavey segment 1, which becomes effective 1 Feb 1958.

No. 1210 (5 September) — Invited applications from certain permanently commissioned line officers for transfer to the Supply Corps.

No. 1510 (8 September) — Discussed the type of maintenance training provided for Radarmen and Radiomen.

No. 1088 (9 September) — Announced Change No. 1 to BuPers Notice 1088 of 24 Jul 1957, which was concerned with the two-telegram system to notify next-of-kin of death.

No. 1120 (16 September) — Announced Change No. 3 to BuPers Inst. 1120.8A, which is concerned with appointment in the Optometry, Pharmacy and Medical Allied Sciences sections of the Medical Services Corps.

No. 1111 (17 September) — Announced Change No. 2 to BuPers Inst. 1111.4B, concerned with the nomination of qualified enlisted personnel for the NROTC program.

No. 1740 (18 September) — Transmitted Public Law 255, 85th Congress, for information. PL 255 authorizes settlement for losses in pay sustained by certain officers during 1932-34.

No. 1085 (23 September) — Furnished info on availability and effective date of the form Record of Practical Factors (Form NavPers 760) for certain rates and ratings.

New Law Now Authorizes Repayment of Loss Of Pay to Certain Officers

Any officer or former officer who was advanced in rank during the period 1 Jul 1932-30 Jun 1934, but did not receive an increase in pay or allowance owing to emergency economy legislation, may now file a claim for settlement of losses.

The repayment of these losses in pay was authorized by Public Law 255 of the 85th Congress, which was approved 2 Sep 1957.

According to the law, widows and legal representatives of officers who are deceased may also apply.

In general, officers or former officers whose original date of commission as ensign was earlier than 1 Jul 1931, and warrant officers who were advanced to chief warrant officer during the period 1 Jul 1932-30 Jun 1934 may be eligible for reimbursement under the act.

Applications for reimbursement under this act should be made in letter form to the General Accounting Office, Claims Division, 441 G St., N.W., Washington 25, D.C. They should be received by the Comptroller General before 2 Sep 1959.

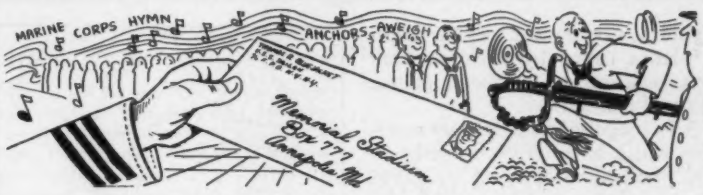
Each claim should contain the following information:

- Officer's complete name.
- Officer's file number.
- The rank to which advanced during the period 1 Jul 1932-30 Jun 1934.
- The date of such rank.
- The duty station(s) to which permanently attached during the period 1 Jul 1932-30 Jun 1934, including the dates attached.
- The address to which payment should be mailed.

Applications should be submitted directly to GAO and *not via the chain of command* and should cite Public Law 255 (85th Congress).

Applicants SHOULD NOT request the Chief of Naval Personnel to verify or furnish service record information in connection with their claims. If the Comptroller General requires record information upon applications under this Act, he will communicate directly with the Chief of Naval Personnel.

BuPers Notice 1740 of 18 Sep 1957 includes a reprint of Public Law 255 and pertinent information.



Step Right Up and Get Your Memorial Stadium Souvenirs

As the Navy-Marine Memorial Stadium world-wide drive continues, the total funds raised as of 1 October amount to $753,000. With the $1,000,000 available from the Naval Academy Athletic Association, this is sufficient to build slightly more than one-half the stadium. To complete the entire stadium $1,400,000 more is needed.

Many ships and stations continue to assist the drive by holding raffles, carnivals and benefits. Contributions from the Submarine Force Pacific Fleet now average $1.94 per man and Sub Pac thus holds Force leadership. USS *Lake Champlain* (CVS39) has closed the gap to $200 on USS *Hancock* (CVA19), the leader of the carriers with her contribution of $6500.

However, on a per-man basis, Fleet Tactical Support Squadron 24 at present tops the list with a total of $1506.06 from the 212-man squadron, an average of more than $7 per man. The sum was the culmination of various fund-raising activities by VR-24 personnel as they solicited donations from the entire base at Port Lyautey, French Morocco.

The VR-24 wives lent a hand, holding a bake sale that netted more than $250. As a reward for having collected the largest amount of contributions, totaling $242, Roland D. Sautter, AEM3, was awarded a four-day trip to London, England.

Afloat totals, as of 1 October:

Atlantic Fleet	$76,831
Pacific Fleet	65,861
Misc. Sea and Foreign	5,391
MSTS	4,142

Ashore totals were:

First Naval District	$ 7,676
Third Naval District	63,670
Fourth Naval District	50,098
Fifth Naval District	47,129
Sixth Naval District	16,867
Eighth Naval District	7,572
Ninth Naval District	34,415
Tenth Naval District	11,481
Eleventh Naval District	11,926
Twelfth Naval District	9,419
Thirteenth Naval District	1,481
Fourteenth Naval District	7,670
Fifteenth Naval District	188
Seventeenth Naval District	1,163
Severn River Naval Command	61,163
Potomac River Naval Command	17,265

Sponsors of the Fund have established a Christmas mail order service for two souvenirs. One is a sword-letter-opener which is given with a five-dollar donation. The sword (with scabbard) is a replica of the Navy sword. The other souvenir given with one-dollar donation is a record of "Anchors Aweigh" and the "Marine Corps Hymn." It is a 45 rpm record of a choral group and 45-piece band. You may send a check or money order to Memorial Stadium, Box 777, Annapolis, Md., for the number of souvenir gifts you wish. They will be mailed, with a gift card bearing your name, to any address in the continental United States, territories or possessions.

Summary of New Legislation of Interest to Naval Personnel

HERE'S A SUMMARY of the legislative action by the 85th Congress, first session, of general interest to naval personnel.

This roundup includes those measures which have received legislative and presidential approval and have been made a part of our Public Laws, as well as some of those which were introduced but on which final action had not been taken.

Public Laws

Gifts (PL 30)—Permanent authority for duty-free entry of gifts up to $50 in value for servicemen overseas.

Doctors and Dentists (PL 62)—Allows the President to issue special calls to active duty of physicians and dentists.

Active Duty Strength (PL 63)—

Authorizes the armed forces to continue at a strength greater than the permanent ceiling of two million men.

Nurses and Medical Specialists (PL 155)—Increases the promotion opportunities of nurses and medical specialists. The average nurse may now reach the grade of LCDR during the course of a career and more nurses are authorized in CDR and CAPT grades. Nurses will serve on nurse selection boards. Mandatory retirement age will be lowered in some cases and nurses will be allowed to count all service (including Reserve time) creditable for pay purposes in computing retired pay. Limit on Medical Service Corps CAPTs is repealed and appointments placed in running mate system.

Test Subjects (PL 208)—Provides incentive pay of $110 a month for officers and $55 a month for enlisted personnel who serve as human test subjects in heat experiments.

Missing Persons (PL 217)—Makes the Missing Persons Act permanent and broadens its coverage to include inactive duty Reservists and others missing in the continental United States.

Substandard Housing (PL 241)—Provi authorization for military construction for fiscal 1958, including some troop and family housing. Includes provision to allow residence of substandard quarters to be charged on a rental basis without loss of full quarters allowance. Also requires that after 1 Jul 1958, all family housing units, including units built under the Capehart program, must be approved in a construction authorization bill. Units could still be financed with private money under the Capehart plan, but each project will have to be justified in an authorization bill.

Pay Loss (PL 255)—Authorizes settlement to officers who received no extra pay on promotion during 1932-1934.

Legislation Introduced

These bills were introduced but final action was not taken during the recent session of Congress (H. R. numbers and S. numbers indicate bills introduced initially into the House of Representatives and Senate, respectively):

Reserve Quarters Allowance (H. R. 3041)—Would pay basic allowance quarters to an enlisted Reservist on active duty for training at the same rates as paid to Regular enlisted men.

Limited Duty Officers (H. R. 6838)—Would increase the annual num-

LCU 11's Pete Is Up To Usual Monkeyshines

The talk of the Amphibious Force and the pride of Landing Craft Unit Division 11 is a monkey named Pete. Only a mite of a monk, Pete spreads morale all over the nine-ship LCU Division with his monkeyshines and capacity for monkey business.

Pete was originally given to *LCU 1481* of LCU Div 11 last March while the ship was in the Philippines, but he soon became affectionately attached to the whole division.

The first step in Pete's acceptance as a member of ship's company was a complete physical—probably the longest one in Naval history. The exam was delayed by difficulties encountered when the corpsmen tried to pin Pete down for his shots. His teeth were in excellent condition, a Navy dentist discovered when he failed to pull his fingers out of Pete's mouth in time.

A well-traveled monkey, Pete has visited Okinawa, Formosa, Korea, Japan, Wake Island, Hawaii and Hong Kong. He carries along his seabag, which holds three kimonos, a dozen diapers, pins and other essentials.

Pete is also a bit of a gourmet, and has sampled such exotic foods as shoe polish, soap, shaving cream and paint. In the process he discovered that paint doesn't agree with him. Neither do bananas.

While on operations, Pete sets himself up on the conn. When the ship moors he can usually be found at the gangway. According to the crew he's better than any watchdog. In Yokosuka, when Pete found a yardman working in the ship's magazine and mistook him for a trespasser, he let out a yelp that was heard from one end of the ship to the other. He is friendly to anyone in the uniform of the day, but adopts a wary attitude around people in civilian clothes.

Delos E. Hoffman, CS1, USN, who prepares Pete's meals, thinks him the best mascot a ship could have.

"It's a comforting feeling," he says, "when Pete suddenly swings onto your shoulder with his cold hands and feet." By John Mullins, JO3

ber of Limited Duty Only officer appointments from 115 to 185 by increasing LDOs to 10 per cent of the total line officers.

Special Duty Officers (H. R. 2812)—Requested authority to eliminate the categories of photographers, psychologists and hydrographers and would create the category of aerology.

Hump Legislation (H. R. 8068)—Would relieve prospective heavy promotional attrition among officers of World War II year groups by early retirement of some senior officers. Selection of captains for continued service would occur after five years' service in grade. Commanders with 20 or more years' service would retire if twice passed over.

Deep Freeze Special Pay (S. 2871, H. R. 9331, 9332, 9337)—Would amend Career Compensation Act to provide special pay for Deep Freeze members.

Career Compensation Act (H. R. 7912)—Would authorize trailer allowance for surviving dependents.

Uniform Allowance (H. R. 5254)—Would authorize $300 uniform allowance to persons other than Naval Academy or NROTC graduates, appointed as commissioned or warrant officers in the Regular Navy.

Antarctic (S. 2189, H. R. 7869, H. R. 7913, H. R. 8055)—All similar, these bills would authorize the establishment of a new board or commission in the executive branch of the government to be known as the "Richard E. Byrd Polar (or Antarctic) Commission." Its job would include gathering, maintaining and publishing information about the polar regions. It would also engage in, and cooperate in exploration of these regions.

"Alfa, Charlie — This is Whiskey, Whiskey . . . Hic . . . Over!"

WAY BACK WHEN

Forty-Nine Years in Nipsic

It's not just the big ships that get around. The small boys, in bygone days and today often lead a varied and exciting life. USS *Nipsic*, for example, in her 49-year career, saw Civil War action, pulled duty in the West Indies and the South Atlantic, the Mediterranean and Prince Edward Island, rounded Cape Horn, survived a beaching during a Pacific hurricane, was rebuilt, cruised Hawaiian waters for several years, and rounded out her career as a receiving ship at Puget Sound.

Commissioned early in 1863, *Nipsic* was a "screw steamer wooden gunboat with a fourth rate brigantine" classification. She was 179 feet, six inches long, with a 30-foot beam and a displacement of 592 tons. Her average speed was six knots, maximum speed, 11 knots. *Nipsic* was one of eight *Kansas*-class gunboats named for Indian names of places.

Commissioned 3 Sep 1863, she first operated with the South Atlantic Blockading Squadron off Charleston, S. C., and captured the schooner *Julia* while *Julia* was attempting to enter the Confederate port. *Nipsic*'s armament at that time consisted of one 150-pound rifle, one 30-pound rifle, two 9-inch Dahlgren smooth bores, two 24-pound howitzers and two 12-pounders.

After the Civil War, her job was to protect American commerce off the coast of Brazil and around the West Indies. In January 1870, she joined the Darien Expedition which was sent out to determine a route for a canal across the Isthmus of Panama. (See ALL HANDS, December 1956, pp. 59-63). She returned to Washington, D. C., in the summer of 1873 and was placed out of commission. Recommissioned 11 Oct 1879, *Nipsic* sailed once again for West Indian waters and followed this by a tour on the European Station. She left the East Coast of the U. S. in January 1888 for the Pacific Station, rounded South America and headed her bow for the Samoan Islands where she commenced duty as station ship.

During the evening of 15 Mar 1889 while *Nipsic* was riding at anchor in Apia Harbor Samoan Islands, winds of gale force started blowing. Also anchored were USS *Vandalia*, USS *Trenton*, the British ship HMS *Calliope* and German ships HIGM *Adler*, *Olga* and *Eber* as well as six merchantmen ranging from 25 to 500 tons.

By the next morning the anchorage was a mass of foam and spray as the wind increased. Of the three American Navy ships, *Nipsic* was the innermost. She had dropped three anchors and veered chain to full scope so as not to swing and collide with *Eber* and *Olga* which ware anchored nearby. At 0500 on 16 March, *Olga* swung into *Nipsic*, carried away the whaleboat, dinghy and the port railing of the poop deck. An hour later the German warship again collided with *Nipsic* causing considerable damage above the hull, the loss of part of the smokestack, the steam launch and the second cutter.

With no smokestack and little draft for the boilers, CDR D. W. Mullin, USN, *Nipsic*'s commanding officer, was forced to use pork in the furnaces to keep up steam for the bilge pumps. An effort was made to toss the forecastle gun overboard and use it as an anchor, but the project was abandoned as the starboard anchor chain broke and the warship started drifting toward the reef astern. CDR Mullin decided to beach the ship and save as many lives as possible. The port anchor chain was slipped and *Nipsic* was beached, bow first, in front of the American Consulate.

Pulled some 500 feet offshore, *Nipsic* had her engines repaired and left for Auckland, N. Z. Again heavy seas forced her return. The next day she left for the Hawaiian Islands where she was rebuilt from the *Kansas* class ship to that of an *Enterprise* class ship. This meant extending her length to 185 feet, her beam from 30 to 35 feet and her tonnage to 1375 tons. This cut her speed to 10.7 knots.

She cruised the Hawaiian Islands protecting American commerce and interests.

She entered San Francisco harbor 30 September and then proceeded to Mare Island Naval Shipyard where she was placed out of commission 2 Oct 1890.

In 1892 she was examined by a survey board, determined unserviceable for further warlike purposes and sailed to the Puget Sound Navy Yard where, among other duties, she was used as a receiving ship. On 11 Dec. 1912 *Nipsic* was stricken from the Naval Register.

Roundup on Living Conditions in the Med with the Sixth Fleet

WHERE DO YOU PREFER to live—Cannes, Juan-les-Pins, Antibes or Nice? Or does Villefranche or Beaulieu or Monaco sound more attractive?

This is one of the problems you'll face when you get orders to the Sixth Fleet—and may you and your wife never have a more serious decision to make than this.

To forewarn you, here's a rundown on living conditions in the Riviera, home area of the Sixth Fleet.

Details concerning the preparations for sailing such as passports, permission to enter the area, immunization, statement of health, travel orders, transportation of household and personal effects, luggage, embarkation and debarkation are similar to most overseas transfers. If you haven't already received advice regarding such matters, CinCNELM Inst. 1050.2b will give you a step-by-step account of procedures to be followed.

Shipment of Automobiles—Before you bring a privately owned vehicle into the Mediterranean area, permission must first be obtained from Commander Sixth Fleet. This can be done by a message or speedletter.

There are two methods of shipment. The first, and much to be preferred, is to deliver the car to the Naval Supply Center, Norfolk, Va., or to the Naval Supply Depot, Bayonne, N. J., for shipment to the Mediterranean via a ServLant AK. Normally, the car will then be offloaded at Villefranche.

Another method is to ship the car via MSTS from New York to a Mediterranean port (usually Naples or Leghorn). This method is only desirable if you are scheduled to travel via MSTS to these ports.

Autos shipped overseas should be in good mechanical condition. Locked gasoline tank caps are advisable and are required for MSTS shipment. Gasoline, machine oil, or masking tape on chrome surfaces will prevent rusting from salt water. The car must be completely empty except for tire-changing tools.

Before sailing, you should:

- Bring with you your registration card, title, and bill of sale.
- Insure your car through your local agent for foreign operation. This should include, at the very minimum, personal liability, fire and theft, property damage, and marine transportation insurance.

It is not necessary to obtain international registrations cards and driver's licenses in the United States before sailing.

Foreign Customs and Currency—Before leaving the United States, you should try to learn as much about foreign customs and currency as you can. The State Department is helpful. Many travel agencies also have up to date information.

To date, there have been no difficulties in taking personal effects and baggage from Italy into France. French and Italian regulations concerning the entry of cigarettes, tobacco and radios are strictly enforced. If you debark at Cannes, you should have no trouble with the customs if you identify yourself as U.S. Navy. If possible, wear your uniform.

Housing—Housing in the Nice Villefranche area is fairly critical the year round and extremely so between April and September. Some landlords will rent for terms running only during the winter months because of the large return they realize from tourists during the summer months.

The Housing Office of U.S. Naval Support Activity, Nice, maintains liaison with local real estate agents and will have a list of accommodations available. It is suggested that you contact this office as soon after your arrival as possible for information and advice regarding housing, rather than attempt to make the rounds yourself. If you write to the Officer-in-Charge in advance, he will try to make reservations.

"He says it's his and he wants it back!"

The following monthly rents are representative of what you may expect to pay on a 12-month basis (excluding utilities):

Apartment (1 bedroom, bath)	$65- 75
Apartment (2 bedrooms, bath)	85- 95
Villa (poor) or apartment (good)	95-110
Villa (good) or apartment (excellent)	110-120
Villa (excellent)	130-150

Some landlords or rental agencies may ask you to pay two or three months' rent in advance. You will be told of this when you contact the Housing Office.

In addition to the advance rent you will be required to deposit a sum usually equal to one month's rent, against breakage, damages, loss of owner's property and unpaid utility bills. When you move, you will be refunded this amount minus the damage which may have occurred during your occupancy.

In spite of this advice, be sure to ask the Officer-in-Charge, Naval Support Activity, Nice, for recent details of the renting situation.

Temporary Lodging Allowance—Upon your arrival you may receive a Temporary Lodging Allowance while seeking permanent housing. This is paid for a period not to exceed 60 days and only if the government quarters are not available and hotel or hotel-like accommodations are occupied. If traveling alone you will receive 50 per cent of the per diem travel allowance for France. If you travel concurrently with your wife, you will begin to receive upon arrival 100 per cent of the per diem allowance. Accompanied by two dependents you receive 125 per cent and three or more will bring you 150 per cent of the per diem travel pay.

If your wife arrives before you do she will receive the 50 per cent payment for the first 60 days or until permanent housing is obtained, whichever is the shorter length of time. Accompanied by one child she will receive 100 per cent, two children, 125 per cent, and with three

the maximum 150 per cent payment.

The 60-day period begins on the day you or your family arrive in the homeport of the flagship. This Temporary Lodging Allowance is paid in addition to the usual dislocation allowance. Check with your disbursing officer to find out the per diem travel allowance for your homeport with the Sixth Fleet.

Station Per Diem—This varies with the country and whether you have dependents living on station. It begins after you find your housing. In France, the per diem runs like this:

- *Officers:* $3.00 per day for subsistence, plus $1.20 for quarters.
- *Enlisted:* $2.25 per day for subsistence, plus $.90 for quarters.

Utilities—Utilities are expensive at any time, and the cost increases in the winter. Coal costs about $50 per ton. It costs about $80 to $100 per month to heat most French villas during the colder months, regardless of the type of fuel you use. If you rent an apartment with gas heat, you will pay less than you would in a villa. The average cost for heating an apartment with gas is from $30 to $40 per month.

To be safe, confirm with the landlord and the utilities company the status of the utilities when you move in. You may encounter considerable difficulty in having your electricity, gas and water meter read the day you move but if you are insistent, it can be done. You'll be happier if you make an issue of it and insist. Have it clearly understood that, if you are expected to pay for the utilities, you will pay for them only from the time of entry until the time of departure. The same principle applies to your telephone service.

Domestic Help—Domestic servants who live in are available for $35 to $50 per month. They clean, cook, market, take care of the children and perform the daily routine household chores. The Welcoming Committee will aid you in finding your servants either by helping you place a "help wanted" ad in the newspaper or on the basis of personal information.

Part-time help is available at a reasonable cost.

Food—You may find the over-all cost of food to be higher than in the States. Many excellent fruits and vegetables are grown locally and, in season, are reasonable in price.

All-Navy Cartoon Contest, 1956
Calvin C. Brown, SN, USN

"This is one of the Navy's new improvement deals."

Meats are expensive, with veal being the most readily available. Sea food is risky.

There is a ship's store with a commissary section in the customs building, Villefranche, near the Fleet Landing. It will supply only such non-refrigerated items as are not available on the local market. Other items can be bought at Navy establishments in Naples and Leghorn at the Army Post Exchange. Nice offers some good department stores.

Certain foodstuffs are available from the flagship stocks when the ship is in Villefranche. It is wise, though to live off the local items as much as possible and merely supplement your stock with the foods available in the commissary or from the flagship.

The local milk is not refrigerated but keeps fresh for a considerable time and is good. If available, of course, get that which is pasteurized and sterilized. The water is good and you need not worry about its purity.

Household Goods—As mentioned above, Nice offers some good department stores, and business places throughout the city are comparable to most of the cities in the United States which have a population of approximately 250,000.

Because of the difference in cycles of the local electric current, some of your electrical appliances will work differently than they did in the States. The electricity is 115-125 volts AC, 50 cycle. Most of your appliances will work adequately, but such items as phonographs and electric clocks (or any other gadget with an electric motor) will not operate at the same speed as they did Stateside.

Many houses are not equipped to handle modern U.S. clothes dryers.

Furnishings — Most houses and apartments are rented furnished. However, many are not so complete as you may have been accustomed to in the U. S. If you have any favorite pieces of furniture, bring them. Baby cribs, highchairs, refrigerators, deep freezers, vacuum cleaners, extra lamps, washing machines (not dryers), radio, serving dishes, flat silver, carving sets, extra glasses, sewing machines and gas or electric ranges have all proved to be useful items in the past.

If your wife sews, tell her to bring sewing equipment and pattern books. Material is available but expensive. Prices for cotton are very high.

As the temperature of the usual European house is maintained at a much lower average than in the States, you may want to rent or buy a gas or oil heater.

You may want to bring some of these items:

Blankets	Electric roaster	Ironing Board and covers
Sheets	Tennis racket	Coffee pot
Pillows	Golf clubs	Sponge mop
Pillow cases	Special medicines	Dust mop
Table linen	Camera	Small gas or oil heater
Hot water bottle	French-English Dictionary	Oven thermometer
Cards and games	Silverware	Clothes hangers
Cook book	Favorite cooking utensils	Rugs
Measuring cups and spoons	Mail order catalogue	Extra pair of prescription glasses
Tape measure	Iron	

Do not bring electric clocks. You'll always be late for muster.

Radio Tax—France has a "use tax" on radios. Members of the Staff and Flag Allowance and officers and crew of the flagship must pay this tax, which amounts to 1500 francs a year.

Clothing — The climate on the Riviera is similar to that of South Carolina. The summers are comfortably warm and the winters, while generally mild by U. S. standards, are marked by cold nights and many damp and chilly days. No matter when you plan to arrive, bring adequate clothing.

Officers—The uniform of the day is Service Blue from October until

May. It is Service Dress Khaki the rest of the year. Service Dress White is required and you are advised to bring two or three sets with you. Bring plenty of uniforms as dry cleaning facilities are poor. Only pressing is available aboard ship.

The purchase of new uniforms presents a problem and you are advised to leave your measurements with a tailor at home. You can have your Service Dress Blues tailored here but the over-all cost is probably more than in the States. Working khaki is worn at sea during the summer months and may be obtained from small stores. Medals are worn when prescribed. Mess jackets and tails are not required. Swords are worn by those ranks requiring them.

Civilian clothes are appropriate on shore leave and informal civilian dress is appropriate while at home. Tuxedos and summer dinner jackets, while not required, are occasionally worn. If you have them, bring them.

Enlisted—Liberty uniform is Dress Blue with white cap during most of the year. White is worn all day during the summer months. Bring plenty of both, at least 10 pairs of whites.

Bring your civilian clothes if you plan to live on the beach with your family.

Dependents—Your wife will do well to bring along her entire wardrobe. Many wives have suits and dresses tailored locally of British woolens and Lebanese brocades, as women's tailoring is reasonable. However, for everyday use, most depend on the clothes bought at home.

Lingerie is expensive. Advise your wife to stock up on nylons and include one or two pairs of walking shoes. Shoes are expensive and often hard to find in the proper style and fit.

Bring heavy clothes for the family for the winter months. Riviera or not, it gets cold.

Automobiles — Bring your car, especially if you bring your family. Bus service is available between Villefranche and other outlying towns and Nice, but is sometimes irregular and often crowded. Taxis are expensive.

Filling stations with grease and oil change facilities are readily available. There are several American type auto dealers in Nice, Cannes

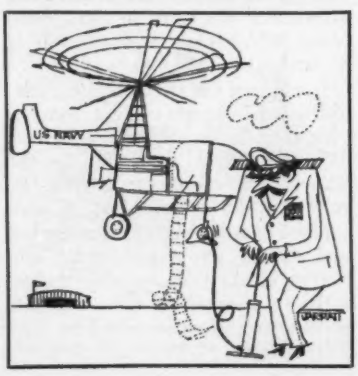
and Monaco. You'll have no trouble finding repair service for your auto.

There are a number of small low-powered cars which may be bought either new or used at prices ranging from $800 to $3000. All purchases of cars by Americans are by American dollars and are tax free. However, if you buy this type of car, it cannot be resold on the local market. It must either be taken out of the country upon your departure or resold to another American for dollars. Time-payment plans are available upon terms comparable to those found in the U. S.

Gasoline costs about 75 cents per gallon on the civilian market but, through the use of coupons, it may be bought for about 30 cents a gallon at certain gas stations. They are rationed on a monthly basis established by the horsepower of your car.

It is not necessary to obtain special registration on plates for your car if it has been registered in a state in the U. S. and bears U. S. tags. You should, nevertheless, register the car with the French authorities to obtain a *carnet de passage*.

An American car imported into France cannot be sold or given away except to another member of the



U. S. armed forces or a non-European tourist. The market is very limited and you should not be optimistic about selling your car.

Schools—There are no Navy-operated schools in the Villefranche area, but the Navy does provide an allotment of about $30 per child per month for schooling. These funds may be spent for tuition, registration, fees, books, school supplies, and correspondence courses. They may not be used for subsistence, room rent or clothing.

There are two elementary schools in which all instruction is in English. Instruction in all other schools is in French and, as a rule, the American children receive no special assistance to learn French.

Schooling will be a problem if you have teen-age children. Some parents send their girls to a private school in Cannes at a cost of about $75 per month. There is a private school in Nice for teen-age boys with instruction in French. American high schools which will accept your teen-agers as boarding students exist in both Germany and France and are tuition-free. Switzerland offers some fine private schools for both boys and girls but they are expensive.

There are no government funds available for nursery school expenses.

Finances—During the first two or three months in the Mediterranean, life will be expensive. While waiting for housing you will have to live in a *pension* which will cost about $10-$15 per day. If you buy a car, pay one month's rent on a villa or apartment (plus one month's rent as breakage), locate your youngsters in a school, and set up a household, you will be looking forward to payday more eagerly than usual. If at all possible, you should bring at least $500 along with you. The allowances you will receive, such as Temporary Lodging Allowance and per diem, may be delayed.

If you have a checking account, personal checks may be cashed by you or your wife at the American Express Company offices almost anywhere in France or Italy. Traveler's Checks can be cashed at American Express offices, banks and most hotels. It would be advisable to maintain a checking account at your bank in the States and carry on your banking by mail.

This Is The Latest Complete List of Navy Enlisted Ratings

As the techniques of naval warfare change, the Navy's structure also changes. New weapons, new ways to use these weapons and new ships require new skills.

On these pages All Hands presents the U. S. Navy rating structure as it stands today, with changes.

You'll find quite a few changes since a similar rating structure was presented in the July 1953 issue. In the Deck Group, for example, Boatswain's Mate B (Construction Battalion), Boatswain's Mate K (Canvasman), as well as Quartermaster Q (Quartermaster) and Quartermaster S (Signalman) have been eliminated and the General Service rating of Signalman has been added. Further changes may be found in almost every other Group.

ENLISTED RATING STRUCTURE

General Service Rating	*Emergency Service and Exclusive Emergency Service Rating*
	GROUP I — DECK
Boatswain's Mate (BM)	BMG—Shipboard
	BMS—Stevedore
	BMR—Rigger
Quartermaster (QM)	QM—Same as General Service Rating
Signalman (SM)	SM—Same as General Service Rating (QMQ and QMS ratings disestablished)
Radarman (RD)	RD—Same as General Service Rating
Sonarman (SO)	SOG—Sonarman
	SOH—Harbor Defenseman
	GROUP II — ORDNANCE
Torpedoman's Mate (TM)	TMT—Steam/Mechanical Torpedoes
	TME—Special/Electric Drive Torpedoes
Mineman (MN)	MN—Same as General Service Rating
Gunner's Mate (GM)	GMM—Mounts
	GMT—Turrets (Limited to grades E-6 and E-7 only)
	GMA—Armorers
Fire Control Technician (FT)	FTA—Automatic Directors
	FTM—Manually Controlled Directors
	FTU—Underwater
	FTG—Missile Guidance System
	FTL—Integrated Systems
	FTE—Electromechanical
Fire Controlman (FC) (Rating disestablished, but there are personnel still in general and emergency service ratings)	FCS—Surface Weapons
	FCU—Underwater Weapons
Guided Missileman (GS)	GS—Same as General Service Rating
Nuclear Weapons Man (NW)	NW—Same as General Service Rating
	ESX—Ordnance Projects Technician (9600-09)
	ESX—Powderman (9620-29)
	ESX—Ballistics Test Analyst (9665-69)
	GROUP III — ELECTRONICS
Electronics Technician (ET)	ETN—Communications
	ETR—Radar
	ETS—Sonar
	GROUP IV — PRECISION EQUIPMENT
Instrumentman (IM)	IMW—Watch and Clock Repairman
	IMO—Office Machine Repairman
	IMI—Instrument Repairman
Opticalman (OM)	OM—Same as General Service Rating
	ESX—Gage Specialist (9685-89)
	ESX—Crystal Grinder (9690-99)
	GROUP V — ADMINISTRATIVE & CLERICAL
Teleman (TE) (General and Emergency Ratings disestablished; personnel will convert to either RM or YN ratings)	TEL—Communications Clerk
	TEP—Registered Publications Clerk
	TET—Teletypist
	TEM—Mailman
Radioman (RM)	RM—Same as General Service Rating
Communications Technician (CT)	CT—Same as General Service Rating
Yeoman (YN)	YNT—Typist
	YNS—Stenographer
	YNM—Mailman
Personnel Man (PN)	PNI—Classification Interviewer
	PNT—Training Assistant
	PNA—Personnel Records Clerk
Machine Accountant (MA)	MA—Same as General Service Rating
Storekeeper (SK)	SKG—General Storekeeper
	SKT—Technical Storekeeper
Disbursing Clerk (DK)	DK—Same as General Service Rating
Commissaryman (CS)	CSG—Ship's Cook
	CSB—Butcher
	CSR—Baker (CSG, CSB, and CSR ratings for grades E-4, E-5, and E-6 only)
Ship's Serviceman (SH)	SH—Same as General Service Rating
Journalist (JO)	JO—Same as General Service Rating
No General Service Counterpart	ESE—Physical Training Instructor
	ESI—Instructor Miscellaneous
	ESF—Fire Fighter
	EST—Transportation Man
	ESW—Welfare & Recreation Leader
	ESU—Booker (Motion Picture Service)
	ESC—Chaplain's Assistant
	ESK—Telecommunications
	ESX—Fingerprint Expert (9670-74)
	ESX—Motion Picture Technician (9700-15)
	ESX—Radio Broadcasting Technician (9720-29)
	ESX—Archivist (9740-44)
	ESX—Librarian (9745-49)
	ESX—Intelligence Specialist (9755-59)
	ESX—Chart and Publications Man, Ashore (9783)
	ESX—Cable Censor (9794)
	ESX—Linguist (9800-89)

General Service Rating	Emergency Service and Exclusive Emergency Service Rating
GROUP VI — MISCELLANEOUS	
Printer (PI) (Rating disestablished, duties combined with LI, but there are still personnel in the general and emergency service ratings)	PI—Same as General Service Rating
Lithographer (LI)	LIP—Pressman LIT—Cameraman and Platemaker
Draftsman (DM)	DMS—Structural DME—Electrical DMI—Illustrator DML—Lithographic (Rating has been disestablished) DMT—Topographic DMM—Mechanical
Musician (MU)	MU—Same as General Service Rating
No General Service Counterpart	ESP—Photogrammetry Assistant ESX—Petroleum Production Man (9630-54) ESX—Laboratory Technician Miscellaneous (9655-59) ESX—Telephone Switchboard Operator (9730-35) ESX—Model Maker (9760-69) ESX—Plastics Expert (9780) ESX—Agricultural Worker (9785) ESX—Artist (9788) ESX—Fisherman (9790) ESX—Pigeon Trainer (9792)
GROUP VII — ENGINEERING & HULL	
Machinist's Mate (MM)	MML—General Machinist MMR—Refrigeration Mechanic MMG—Gas Generating Mechanic
Engineman (EN)	END—Diesel Engineman ENG—Gasoline Engineman
Machinery Repairman (MR)	MR—Same as General Service Rating
Boilermaker (BR) (Limited to grades E-6 and E-7 only)	BR—Same as General Service Rating
Boilerman (BT)	BT—Same as General Service Rating (BTG and BTR ratings disestablished)
Electrician's Mate (EM)	EMP—Power & Lighting Electrician EMS—Shop Electrician
Interior Communications Electrician (IC)	IC—Same as General Service Rating
Metalsmith (ME)	MEG—Shipboard Metalsmith MES—Sheet Metal Worker MEB—Blacksmith MEW—Welder
Pipe Fitter (FP)	FPG—Shipboard Pipe Fitter FPP—Plumber FPB—Coppersmith FPS—Steam Fitter
Damage Controlman (DC)	DCG—Shipboard Damage Controlman DCW—Carpenter's Mate DCA-ABC Defenseman
Patternmaker (PM)	Same as General Service Rating
Molder (ML)	Same as General Service Rating
	DESM—Underwater Mechanic

General Service Rating	Emergency Service and Exclusive Emergency Service Rating
GROUP VIII — CONSTRUCTION	
Surveyor (SV)	SV—Same as General Service Rating
Construction Electrician's Mate (CE)	CEG—General Electrician CEP—Power Lineman CEL—Communications Electrician
Driver (CD)	CD—Same as General Service Rating
Mechanic (CM)	CMG—Gasoline Engine Mechanic CMD—Diesel Engine Mechanic
Builder (BU)	BUL—Light Construction BUH—Heavy Construction
Steelworker (SW)	SWS—Structural Steelworker SWR—Construction Rigger
Utilities Man (UT)	UT—Same as General Service Rating ESX—Excavation Foreman (9781)
GROUP IX — AVIATION	
	GROUP IX—AVIATION
Aviation Machinist's Mate (AD)	ADP—Propeller Mechanic ADR—Reciprocating Engine Mechanic ADJ—Turbojet Engine Mechanic
Aviation Electronics Technician (AT)	ATN—Communications and Navigation Equipment ATR—Radar ATS—ASW
Aviation Electronics Man (AL) (Disestablished, but there are still personnel in the rating)	AL—Same as General Service Rating
Aviation Guided Missileman (GF)	GF—Same as General Service Rating
Aviation Ordnanceman (AO)	AOU—Utility AOT—Turrets
Aviation Fire Control Technician (AQ)	AQB—Bomb Director AQF—Aircraft Armament Control Systems
Air Controlman (AC)	ACR—Radar ACT—Tower ACW—Airborne CIC Operator
Aviation Boatswain's Mate (AB)	ABU—Utility ABG—Gasoline Handler ABA—Airship Rigger
Aviation Electrician's Mate (AE)	AEM—Electrician AEI—Instrument Repairman
Aviation Structural Mechanic (AM)	AMS—Structural Mechanic AMH—Hydraulic Mechanic
Parachute Rigger (PR)	PRS—Survival PRM—Maintenance (PRS and PRM in Pay Grades E-4 and E-5 only)
Aerographer's Mate (AG)	Same as General Service Rating
Tradevman (TD)	TDR—Repairman TDI—Instructor
Aviation Storekeeper (AK)	AK—Same as General Service Rating
Photographer's Mate (PH)	PHG—Cameraman PHR—Camera Repairman PHL—Laboratory Technician PHM—Microfilm PHA—Aerial Cameraman
Photographic Intelligenceman (PT)	
	ESV—Aviation Pilot
	ESA—Aircraft Carburetor Mechanic
GROUP X — MEDICAL	
Hospital Corpsman (HM)	HM—Same as General Service Rating

General Service Rating	Emergency Service and Exclusive Emergency Service Rating
	GROUP XI — DENTAL
Dental Technician (DT)	DTG—General
	DTP—Prosthetic
	DTR—Repair
	GROUP XII — STEWARD
Steward (SD)	SDG—Cook
	SDS—Stateroom Steward
	(SDG and SDS for grades E-4, E-5 and E-6 only)
	GENERAL APPRENTICESHIPS
Title	*Abbreviation and Pay Grade*
	Seaman Apprenticeship
Seaman Recruit	SR (E-1)
Seaman Apprentice	SA (E-2)
Seaman	SN (E-3)
	Fireman Apprenticeship
Fireman Recruit	FR (E-1)
Fireman Apprentice	FA (E-2)
Fireman	FN (E-3)
	Construction Apprenticeship
Construction Recruit	CR (E-1)
Construction Apprentice	CA (E-2)
Constructionman	CN (E-3)
	Airman Apprenticeship
Airman Recruit	AR (E-1)
Airman Apprentice	AA (E-2)
Airman	AN (E-3)
	Hospitalman Apprenticeship
Hospital Recruit	HR (E-1)
Hospital Apprentice	HA (E-2)
Hospitalman	HN (E-3)
	Dental Apprenticeship
Dental Recruit	DR (E-1)
Dental Apprentice	DA (E-2)
Dentalman	DN (E-3)
	Steward Apprenticeship
Steward Recruit	TR (E-1)
Steward Apprentice	TA (E-2)
Stewardsman	TN (E-3)
	Special Transitory Ratings
Officer Candidate	OC
Aviation Officer Candidate	AOC

Planning on Renting an Apartment or a House? Here are Some Hints

Sound advice is a commodity that is almost as precious as gold and in some cases where advice is not forthcoming or is not followed it may cost an unsuspecting Navy family some gold—particularly in the renting or leasing of apartments or houses.

The August issue of "JAG Journal," published by the Navy's legal office, contains some sound suggestions (prepared by LCDR N. S. Cole, Jr., USNR) on how to make your landlord-tenant relationship pleasant. According to the magazine, "when you rent without signing a lease you usually become a tenant from month-to-month and you cannot move nor can the landlord put you out, except for nonpayment of rent or creating nuisance, without giving the notice required by state law. This varies from state to state and should be checked. This does not mean that the landlord can physically restrain you, but it does mean that you can become liable to him for damages suffered as a result of your moving without proper notice and in some states he can hold your furniture until the rent is paid."

Navy legal officials said that notice periods vary in different states. For example they listed North Carolina which requires a seven-day notice and Virginia which requires a 30-day notice of moving. To be on the safe side they urged naval personnel to give a 30-day notice wherever they are living.

The magazine explained a lease as being simply a rental contract which binds you and the landlord just as any other contract. The fact that you are in the armed forces and receive orders requiring you to move does not release you from a lease unless there is a "military clause" in the agreement. Such a clause generally provides that, upon receipt of orders, the lease may be terminated by the tenant's giving a certain amount of notice to the landlord. If you break a lease without legal cause by moving before the end of the term, you will leave yourself open to being sued for damages. Again, states differ on the amount of damages, but they all recognize the right of the landlord to sue you. If the landlord is successful, you might find yourself paying rent in two places.

"It is advisable, then, to consider a number of things before signing your name to a lease. The rent of course, is a prime consideration. In areas near military installations rents are usually high. You may find it best to leave your family where they are while you look around. Don't forget that unless utilities are furnished you will have that cost in addition to your rent. The fact that after moving in you find that the total cost of living is so high you can't afford to pay it is not legal justification for breaking your lease.

"Inspect the property carefully. Generally speaking, except for hidden defects, the landlord rents 'as is.' Inquire about the neighbors, investigate play areas for the children, parking space for your car, location of schools, churches, bus lines and shopping centers. This place, whether it is a three-room apartment or a 14-room house, will be your home for a period of time. You can't always get exactly what you want, but shop around until you find something that looks as though it would be suitable. Dislike after you move in can make your homelife miserable, but can't break your lease.

"Read your lease carefully and don't sign anything you are not prepared to live up to. Make sure there is a military clause. If the landlord promises you something or agrees to waive a requirement, have it written in the lease or it will not be enforceable. If you have any doubts, seek advice BEFORE signing.

BOOKS: PLEASANT JOURNEYS OFFERED BY NAVY LIBRARY SELECTIONS

RECENT NAVY LIBRARY selections will take readers back to the days of World War II when Allied bombers roared off on impossible missions, aerial photo planes zoomed low over strategic targets and the tracks of sledge patrols crisscrossed Greenland. Journeys further into the past—when the harsh thump of the guns aboard Union monitors were a familiar sound and President Lincoln danced a jig after hearing of the first Union naval victory—may be made by readers of two new historical works concerning the War Between the States.

Included in the books on World War II is ***Low Level Mission,*** by Leon Wolff, which tells the story of operation "Tidal Wave," the air raid against the vital Ploesti refineries in Rumania. Some described the 1 Aug 1943 raid a total failure while others claimed it was a brilliant success. But no one disputes the magnificence of the performance of the crews of the 177 B-24 bombers.

Wolff's story tells of this magnificent performance and relates the pros and cons of the attack. The raid was made at zero altitude in an effort to gain surprise. But because of accidents, mistakes and delays, the element of surprise was lost. The bomber force ran into a hornet's nest of 400 enemy fighters after making the 1350-mile trip to the target. Countless 88mm guns rained flak down on the planes as they dodged smoke stacks and barrage balloons.

Low Level Mission will give you an insight into one of the most famous aerial missions of World War II, the reason for it, the men who flew it and its results.

Another WW II book added to the Navy collection this month is ***Air Spy*** by Constance B. Smith. The author relates, with the authority of a veteran photo interpreter for the Allied Air Forces during the war, the role of photo intelligence in shaping the Allied victory.

After tracing the history of aerial reconnaissance, he launches into a description of the advantages it gave Allied forces in the early war years. Smith highlights its role in connection with commando raids and the bombing offensive, tells of the British watching the growth of the German Operation "Sea Lion," the planned invasion of England, and describes the courage of those who flew alone in unarmed planes to obtain pictures.

The Sledge Patrol by David Howarth unfolds another panel of the little known history of World War II, this one concerning one of the world's most barren areas, the northeast coast of Greenland. The 22,000 inhabitants of this Danish Colony resisted the Germans after Denmark fell to the Nazi forces, by protecting four vitally important weather stations located 700 miles beyond the last settlement.

To protect the stations, Greenland's governor organized a sledge patrol of 15 men, each with a dog team. This book relates their adventures as the weather installations pass from enemy to friendly hands in a little known phase of combat history.

The birth of the ironclad Navy is related in the two Civil War selections now available along with scores of other books through your ship or station library. ***Mr. Lincoln's Navy*** by Richard S. West, Jr., and ***The Rebel Shore*** by James M. Merrill tell the story of Union sea power, of Northern victories and defeats.

They tell of the campaign against the blockade runners and of the faith put in the Navy by its secretary, Gideon Welles. Both books cover the early development of the monitors, underwater mines, torpedo boats and the submarine. But each retains its originality. Merrill has included not only historical events, but also the excitment of Northern civilians over the capture of Mobile and the fears of the population of New Orleans as the Union Navy fought its way past forts and defenses and steamed up the Mississippi toward the city.

Richard West, a professor of history at the Naval Academy, notes the growth of the Union Navy from a force of 23 ships to 640 in *Mr. Lincoln's Navy.* He tells of President Lincoln whose personal interest in the success of the Navy was so sharp that he ordered daily progress reports telegraphed to the White House. West, who has written many other historical works concerning the U.S. Navy, closes his factual book by quoting Lincoln's words, "Uncle Sam's web feet" had been present "at all the watery margins . . . on the deep sea, the broad bay and the rapid river . . . up the narrow, muddy bayou and wherever the ground was a little damp, they had been and made their tracks. Thanks to all."

On the scientific literary side is ***The Age of Psychology*** by Ernest Havemann, prepared in terms that can be understood and enjoyed by the layman. He discusses psychiatry, psychoanalysis and psychology and has skillfully woven into a thrilling story, tales of the mind and its exploration.

Below the Salt is the latest in a long series of novels by Thomas B. Costain with the usual swashbuckling action taking place in 12th Century England. Within this framework, Costain has placed a story of chivalry, adventure and the social upheaval in England that led to the Magna Charta and Runnymede.

NOW HERE'S THIS

Worth Picking Up

A mystery litterbug who throws trash around on the deck is helping to make USS *Franklin D. Roosevelt* (CVA 42) a neater and cleaner ship.

The first time the phantom struck he left several newspapers and paper cups on the second deck behind the MAA shack. Five men stepped over or around the trash before a passerby finally threw it in a trash can.

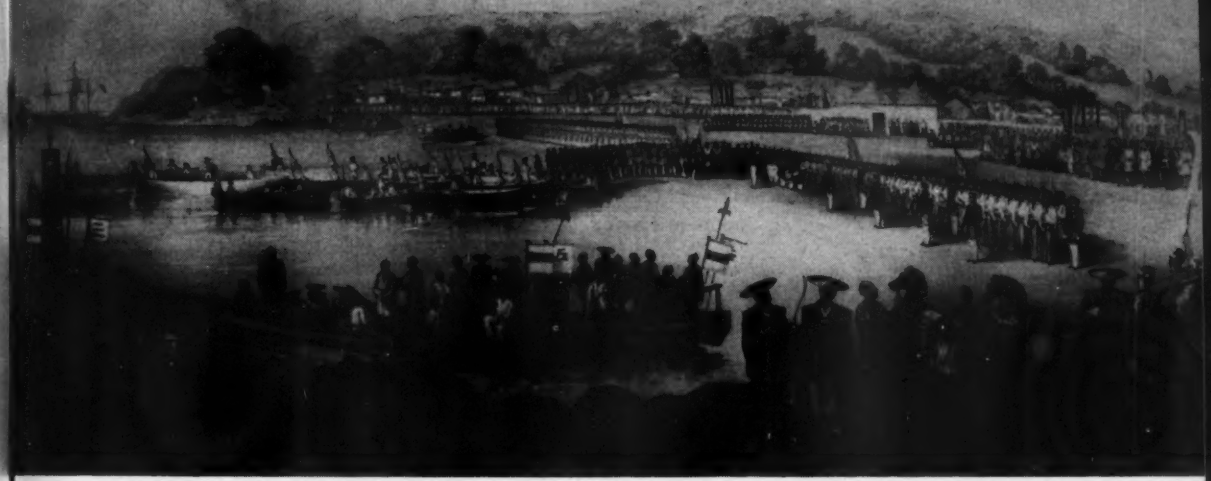
The next time eight FDR men stepped over or on the debris before someone picked it up.

On each occasion the picker-upper was awarded a five dollar prize from the ship's store for his efforts.

Now, thanks to the phantom, the men of *FDR* are a lot more particular about appearance, for who knows, "There may be gold in that there trash."

ALL HANDS BOOK SUPPLEMENT

With Perry in Japan



Somewhat more than 100 years ago, Commodore Matthew C. Perry represented the United States in negotiations with Japan which resulted in the opening of that nation to commerce with the Western world. As a junior officer of USS *Macedonian*, 24-year-old passed midshipman John Glendy Sproston recorded his impressions of these conferences and the reaction of the Japanese to the visit of U.S. men-o'-war to feudal Japan

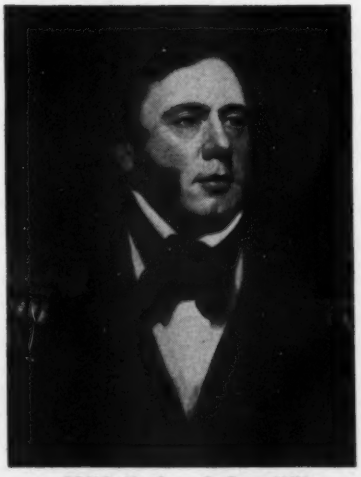
The 105-page manuscript A Private Journal of John Glendy Sproston *first came to light when it was purchased by the Library of Congress in 1926. The previous owner of the manuscript was not known and, since that time, it has not been possible to trace its earlier history.*

Macedonian *had sailed from New York in April 1853 and joined the Squadron in February 1854 at the American Anchorage in Edo Bay. Although Commodore Perry had given strict orders not to communicate with anyone in regard to the Squadron's movements, discipline or regulations, Sproston lost no time in recording the activities of the expedition.*

After a brief preliminary mention of the present visit, he began his journal with Captain Henry Adam's interview with the Japanese commissioners and closed it eight months later in Hongkong only because he had the opportunity to forward it to his family in Baltimore through a personal friend who was homeward bound. Enclosed with the rough draft of the manuscript was the note: "Sent in an unfinished state; will correct on reaching home, if I live."

Sproston did live through the Japan expedition and duty with the East India Squadron. He returned home in 1856 but did not have time to revise his journal.

On 28 Apr 1861, then LT Sproston was ordered to take command of USS Powhatan *for duty along the Virginia coast and inland waters. Later, he was transferred to* USS Colorado *and later to* Seneca, *one of the vessels of the South Atlantic Blockading Squadron, as executive officer. He was killed in June of the following year in Florida while in command of an expedition sent ashore to capture a Confederate captain.*

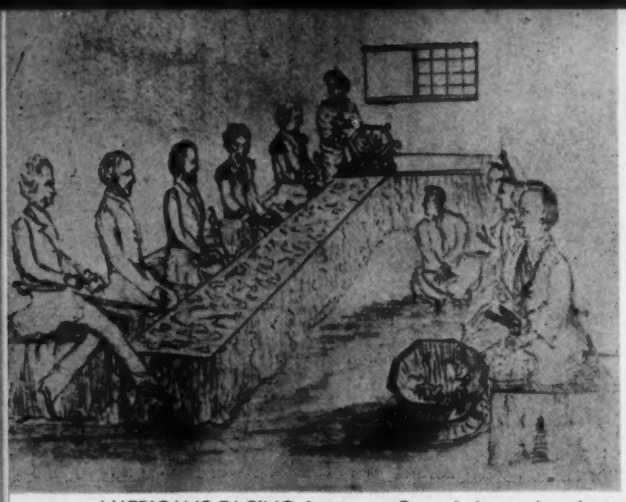


COMO Matthew C. Perry USN

8 Mar 1854, Yedo Bay, Japan

THIS DAY, if it be not hereafter remembered by our own, will at least be long kept in mind by the people of this country. The morning opened clear and pleasant with a light northeasterly wind which died away entirely in the latter part of the forenoon.

From *A Private Journal of John Glendy Sproston, USN*, edited by Shio Sakanishi. Published by Sophia University, Tokyo, 1940.



AMERICANS FACING Japanese Commissioners in private room seem to have difficulty sitting Japanese fashion.

In the morning watch, I noticed the Japanese erecting a fence from the landing to the House of Reception. This, I knew, was contrary to the express desire of the Commodore who stated to them that he would not land if they did so; a few minutes after, a gig left the flag-ship and pulled to the landing, which resulted in the fence being taken down.

At 11 AM, thirty boats belonging to the squadron pulled for the landing with Captain Buchanan leading in his gig (he having charge of the military proceedings of the day). Reaching the landing, [they] disembarked the Marines and armed seamen picked for the occasion.

About this time *Macedonian,* which had been sprung broadside to, fired a salute of seventeen guns. The Marine guard was drawn up on the left and the seamen on the right, leaving a space of about a hundred feet in between the two, forming two columns stretching from the water's edge to the entrance of the main building, with bands of music at each end—bass and small drums, fifes and so forth, arranged near the troops. The boats hauled off, anchored in what was intended to be a line 30 yards from the beach. In the middle of the line were 12 launches, each mounting a howitzer, intended for saluting.

THE SIGHT NOW was certainly a pleasing one. From the House of Reception, about 100 yards, sloping very gradually to the water's edge, were drawn up the troops as I before mentioned: The Marines, 160 in number, in full dress, their arms glittering in the sun; opposite to them the sailors, 224 in number in blue jackets and trousers, and blue caps with bands of red, white and blue, with stars worked in the blue stripe. Their arms consisted of musket, pistol and cutlass.

The white barge with the blue broad pennant now approached. As it passed the boats, the officers and men rose and took off their caps, a mark of respect. As soon as the Commodore landed, the drums rolled, the troops at the word of command from Major Zeland presented arms, the bands struck up the "Star Spangled Banner," and gunboats commenced saluting. The first salute was a national one of 21 guns, and the second a commodore's of 17 guns, or rather a minister's, for it was in that capacity that the Commodore appeared, being styled as the "Lord High Commissioner from America."

Preceded by the broad pennant, the pole of which was ornamented with a gilt battle-ax head, and followed by the officers composing the suite [with] six armed servants bringing up the rear, the Commodore passed up between the lines bare-headed, and entering the building disappeared from my view (my station being in charge of the boats from this ship).

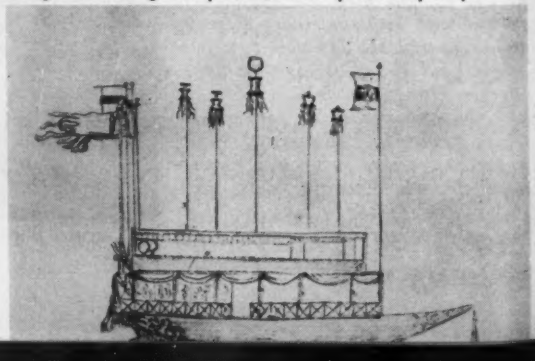
Being close to the shore and having a good spy-glass, I observed with ease everything that was going on outside. I saw them passing up and down the lines with cake and candy for the officers, who also made them distribute it among the sailors and soldiers. The two bands of music performed alternately, relieved by a strong muster of drums and fifes. The latter excited their curiosity very much, it being a kind of music which they could better understand.

The open space included about five acres, round which were erected canvas screens like their flags, with white, black and white stripes and diamond-shaped holes cut at regular intervals. Here and there for some extent a cord only denoted the line of demarkation, and here were assembled crowds of natives, most of them being servants, evidently, from their livery. Some were of blue with white strips of different shapes, others of a reddish color with lacquered hats, shaped or formed like those of the Chinese. Numbers of the outsiders would watch their opportunity and creep in to see the show, when the authorities, observing them, would attempt to seize them and the race that ensued reminded me of a militia training when the police officers are in chase of boys.

IT BEING NOW about 1 pm, I sent a boat ashore with the grog to freshen their nip. In the meantime, negotiations had commenced. The Commodore, attended by five officers and the Japanese Commissioner, followed by a like number, had retired to a private room to arrange preliminaries, while the remainder of the suite in the company of several princes and the Governor of Uraga (the place of the former conference) occupied the main building discussing the rather limited bill of fare, the principal viands being cold soup sweetened, snake chowder, mixed vegetables, cake and candy. Not being as yet able to speak from personal observation of the interior of the building, I shall not at present give any description of it.

About half past three pm, the drum sounded to quarters [and] officers and men resumed their stations. About a dozen Japanese conveyed a number of kegs and boxes containing *sake* and sweetmeats down to the landing. (Presents for the Commodore.) A few minutes after, several Japanese authorities passed along the line and entered their boats; these were followed in time by the Commodore, accompanied by the Commissioner.

ANOTHER of the sketches shows the Shogun's barge. Shoguns, had great power, were politically important.



Again the drums rolled, the escort presented arms, the bands sounded their martial strains. When the barge pulled from the landing, the men in the boats rose and doffed their caps, the officers saluted, then the boats were beached. The seamen, Marines, bandmen, having again been martialed in their respective boats and the line abreast reformed, the escort set out on its return in good order, and all expressed themselves well satisfied with the proceedings of the day.

On the following day, Captain Adams, fleet captain, met a deputation of the Japanese on board *Mississippi* and held a consultation. This was followed by several similar interviews.

March 23

ONCE MORE DID a visit of ceremony take place between the Commodore and Commissioners. I went in charge of our boats but without the howitzer. The men, however, were armed as usual. I had also another officer with me, who remained by the boat after the Marines were landed, thereby enabling me to see the procedings of the morning.

In the principal audience hall were displayed the presents from the Emperor of Japan to our Government. As I entered, the Commodore and Commissioners passed out to the open space in front where seats were ranged for their convenience, but for what I did not then know. Without delay, I entered the building and being at the time the only inmate of the room, had an excellent opportunity of closely examining the various articles spread out before me.

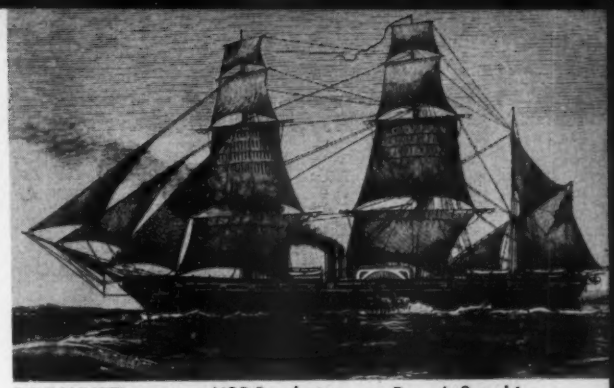
There were lacquered boxes of different sizes and shapes, embracing several varieties of style, the exterior of some being plain, the interior dark purple with gilding. Others had on the exterior raised metal figures of birds, some six inches in length and beautifully executed, also vines and flowers. Besides boxes, there were sets of small drawers supported in a stand, resembling a miniature wardrobe without doors in front. These were also gilt.

Then there were several low tables exactly like (in form, not material) the tables I had often seen used at Loo Choo by the scribes to write upon—they sitting cross-legged by them. These were ornamented like the boxes, except the figures were not raised. Covered cups, plates, saucers, cup stands and chow-chow stands completed the assortment of lacquerware, as well as I remember. Their quality was evidently superior and beautiful, excelling every other nation. I compared several articles of Chinese lacquerware with some procured at Loo Choo and found the former very inferior to the latter, which in its turn could be compared with a similar kind here displayed. Of the more beautiful varieties, no other nation can produce them.

The silk and crape department next attracted my attention. Both were of a pattern very similar to our own. The former wanted body, but the latter was very superior in style and texture. Besides the above-mentioned articles there were many others, some of which were packed up so I could not discover what they were.

Returning to the open space in front of the building, I found the officers and Japanese assembled witnessing the Marine guard drill, which they did very well. The maneuvering evidently astonished them.

THE MARINE DRILL OVER, the Chief Commissioner waved his fan and gave his order, when immediately some 25 or 30 Japanese, large, powerful and stout men, robed only in waist cloths, came forward and at the word of command each seized from a large pile two bags of rice, each weighing from 160 to 180 pounds, and carrying them a distance of about 300 feet, piled them up again. Then two or three of the stoutest, taking one of the bags and raising it up above his head, threw it up and, turning it at the same time, caught it at the other end. Another, again, raising it breast high, would turn a somersault lifting it with him as he rose again. The rice was then presented to the Commodore, who sent it off in the launches.



SIDE-WHEEL steamer *USS Powhatan* was Perry's flagship. Commissioned in 1851, it was considered Navy's best.

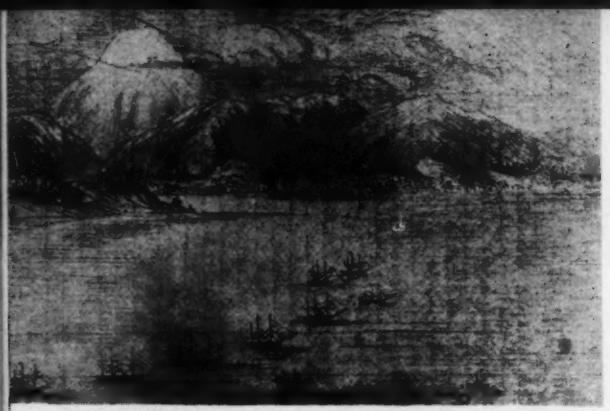
We then adjourned to the Treaty House. The paper-covered windows on one side had been drawn aside and seats arranged for the officers nearby. The ground in front had been cleaned and a ring formed. A Japanese official then took his station at one end and called off the wrestlers by pairs, who appeared upon the arena two at a time. After each round, they took a mouthful of *sake* and rubbed some salt upon their chests.

They first assembled together round the ring and went through a rather classical or gladiatorial pantomime, in which their large proportions appeared to advantage. Then they retired and the first two were called out.

They took positions at opposite ends of the ring and in a stooping position clasped their hands twice before them, then spread out their arms full length, after which they advanced into the middle of the ring and stretched their limbs then, stooping down with a short sharp cry, they closed in for the contest.

Their method of wrestling differed from our own in not using their feet, but confining their exertions to the muscular use of their hands and arms and butting with the head upon the chest and shoulders. In their respirations they would give forth a sound like "Hiss-hiss;" others reminded me of the words "Yes Sir."

ORNATE TENTS housed about a dozen Japanese soldiers. Military garb differed little from civilian clothes.



SPROSTON drew a rough outline of the squadron's position as it lay at anchor in the harbor of Shimoda.

When one of the combatants would be thrown or forced out of the ring, he would either return to the contests and make one or more efforts to overcome his opponent or, bowing his head as he assumed a half-stooping position, would thus acknowledge his defeat.

This exhibition over, we sat down to a chow-chow at which I demolished four or five dozen oysters with a splinter of wood for a fork, also eggs, fish, cake and candy and carried off, like the rest, the remnants of the feast in a piece of paper.

28 March

THIS DAY CLEAR with a strong northerly wind. Put our ship in prime order and dressed the crew in white frocks over blue. At 2 pm, the Japanese boats were seen approaching from the direction of the town. Three stopped at *Mississippi* whilst the fourth, containing the interpreter, pulled to our ship and he told us in very good English that the Commissioners requested that Captain Adams might be sent for to accompany them in their visits to the different ships. They were, I suppose, more accustomed to him than to other officers since, as flag captain, he had considerable intercourse with them.

The Commissioners having walked round the decks of *Mississippi* took their departure for our ship, and the officers assembled on the quarterdeck to receive them. The boats with the retainers first came alongside. They, assembling on each side of the gangway and bowing to the Commissioners on their hands and knees as they passed them, followed on behind. The boatswain piped and the Marine guard presented arms.

The Captain introduced the officers and then walked them round the spardeck, showing them the large ten-inch pivot guns, being larger than they ever saw before; but they betrayed very little astonishment. Then they visited the cabin and officers' apartments, gun and berth decks, and all the other parts of the ship, with which they were very much pleased.

We went to general quarters, exercised the big guns, called away boarders, pikemen, firemen, axemen, carbineers and pumpmen, going through the various evolutions with a great deal of spirit, and having evidently the desired effect upon them of convincing them of our power and force when occasion required.

THE EXERCISE BEING over, the Commissioners shoved off in their boats for *Powhatan* where they were to be entertained in a more substantial manner. Five or six officers from this ship, I among the number, then started in a boat for the flagship, which we found handsomely decorated with flags, and on the quarterdeck were ranged tables, or I might say a table, for they were placed so as to form one continuous display of delicacies, many of which I, for one, had not seen or partaken of for months.

The Commissioners had been examining the machinery, they having steam up and slowly revolving the wheels to show them the operation of the several parts of massive iron jointed together. What knowledge they possess of steam I cannot say, but I am told that the interpreter understands well the principal and motive power, and I should judge from their intercourse with the Dutch that they had informed themselves of the various discoveries in science and mechanism made heretofore by enlightened nations.

Having walked round the ship, they descended into the cabin with the Commodore and captains where they were, no doubt, well entertained. Their retainers remained on deck and joined us in the onslaught upon the numerous edibles there displayed. Champagne, sherry, port, whisky, punch and, in fact, every kind and quality of wine or liquor that came first to hand, satisfied their wants. a rather tall and gaunt Japanese that sat next to me drank them all and was, of course, rather merry afterwards.

31 March

THIS DAY has the treaty of amity and friendship been signed by the Commodore and Commissioners. Captain Adams sails with it for the United States in a day or two, taking passage as far as the Sandwich Islands in *Saratoga.*

4 April

SARATOGA set sail this morning and was cheered by the whole squadron as she stood out of the harbor, homeward bound. She still has half the world and stormy Cape Horn to encompass before she reaches her wished-for haven of rest and security.

11 April

IN OBEDIENCE to signal from the flagship, the squadron this morning got under way, the steamers leading, and stood out of the harbor of Kanagawa, bound we hardly knew whither. When about three miles from our former anchorage, we noticed that *Lexington* was aground. The Commodore sent *Vandalia's* launch to her assistance. When we had reached the middle of the Bay, signal was made and the squadron anchored. We had felt considerable curiosity as to whether we would go to Yedo or not, and the general opinion was that the Commodore intended to anchor as close to the capital of Japan as he could; and the fact of the wind being from the northeast, which was ahead, accounted for our anchoring without changing our destination.

But in the course of an hour or so we were again under way and standing down the harbor, anchored off Webster Island or, in other words, came to in the American anchorage. Naturally curious as to the reason of our apparently uncertain movements during the day, I enquired for an explanation from some of the officers of the flagship and received the following solution:

It was well known to all that the Commodore on the day the treaty was signed expressed to the Commissioners his intention of visiting Yedo. But they dissented, saying they had not the power to grant him the privilege, having no instruction on that point, and politely declined the offer of a passage in the steamers. The Commodore, however, reiterated to them his intention of doing so.

The next day we heard of the interpreters having said that if the Commodore went up to Yedo, they would commit the *Harikari.*

Now the steamers had, when first under way, headed up the Bay in the direction of a small island which we called Yedo Beacon, but that afterwards they had changed their course. The two Japanese boats towing astern convinced us that the interpreters were on board. From what we could learn, it appears that the one on board *Mississippi* actually became sick when he saw the course of the steamers, and when they were only a few miles from Yedo, commenced standing right up in the direction of that port. He threw his cloak and long sword to young [LT William] Speiden saying "take them, for I have no more need of them. My short sword will be all that I shall require."

18 April

WE HAVE NOW been at sea six days, having sailed the morning following our anchorage off Webster Island, bound to the Bonin Islands. We stood down the Bay of Yedo with steering sails set on both sides, and this time passed to the eastward of the main island, which is preferable both going and coming, as you have more sea-room in case of a gale springing up. The first three days out we experienced rainy, blowy weather, wind generally from the northeast. The weather being continually overcast, we were unable to determine our position every day, which was very much to be desired, as there is a regular gulf stream of strong current sweeping along the coast of Japan, of which but little is known.

Saratoga, when near the entrance to Yedo Bay, was swept to the northward and eastward and was there weeks [days?] working back. We experienced a heavy tumbling sea which made everyone seasick, at all predisposed that way. The air and water, taken every hour, differed from six to 10 degrees, the water being the warmer and in every respect the appearances were the same as we would have encountered in our own Gulf Stream, excepting in this case there was no gulfweed. This boisterous weather was succeeded by a calm which lasted 24 hours.

We had so far passed near to, but not in sight of, any of the numerous islands which abound in these seas, contrary winds having prevented us from doing so. They are all small and uninhabited, but as seldom any vessels but whalers visit these waters, the position of many of these islands as laid down on the chart must be incorrect; it is very necessary that any such mistakes should be corrected, as in all probability before many years, hundreds of ships will pass through these groups in the California and China trade.

17 May

In the afternoon two sails were reported in sight from aloft which, on nearing them, proved to be whalers, both hoisting American colors, one a ship and the other a barque.

The barque passed close to us and hove to. We did the same, and the first mate came alongside in a whaleboat which, impelled by four long oars and steered by a fifth, fairly danced over the long heaving swell. He stated the barque to be the *Rambler,* six days out of the Bonins where they had been provisioning ship.

He said they were two years and a half out from the United States and had 500 barrels of sperm; they were then bound to the Japan Seas. We informed him of the existing treaty between the two countries and pointed out the commercial ports on the chart which were open to us.

[*The foregoing is an excerpt from the Sproston Journal, covering the section in which the author was in Japanese waters*—ED.]

'TOM THUMB' railway interested the Japanese most of all the presents and exhibits brought by Commodore Perry.

IT USED TO MAKE US feel pretty good when we heard the complaint that we don't put out enough copies of ALL HANDS. However, we've just read an item that's caused us to wonder if this is really a tribute to our literary efforts. This editorial appeared in *The Antenna*, weekly newspaper of the Naval Radio Station, Cheltenham, Md.:

"Looking back over a month of publication, the Antenna can report that its impact on the station, while not explosive, has been generally favorable.

"Some of its most outstanding accomplishments can be enumerated as follows. It has:

"1. Provided a new and challenging game for Tuesday afternoons—finding the typographical errors and misspellings.

"2. Given housewives a firm yet absorbent household aid—for wiping up mud on the floor, or lining the garbage can.

"3. Made available a handy, reliable instrument, quickly folded, for swatting flies. Or, in a crumpled state, for practicing basketball shots at the burnbag.

"Of course, some people *read* the Antenna, and others even send it home to the folks or family—one use, incidentally, for which it was originally intended.

"At any rate it will continue, for the present at least, to provide news of the people and progress at Cheltenham. And being free,

it may be the only good deal left since the five-cent cup of coffee went up to a dime."

Before we had a chance to recover from this blow to the editorial ego we came across something that hit even closer to home—one of the offices here in this Bureau was using a bundle of outdated ALL HANDS as a doorstop. (Actually they considered the magazines, even old ones, too valuable to throw away. They finally located a unit library that was only too glad to take them off their hands.)

Somehow, we can't bring ourselves to believe that housewives really line their garbage pails with the immortal words of wise Navy scribes, at least not until after they've read them.

★ ★ ★

We feel a little better since we've gotten all this off our chests, but we still have a few more lines to fill. So, we'll tell you a second hand sea story. During fueling operations for some DDs off the Philippines the Boatswain's Mate of the Watch on board USS *Hornet* (CVA 12) sounded his pipe over the PA system, then solemnly announced: "Now the smoking lamp is out throughout the ship while destroying refuelers."

Wish we'd been there. We've never seen a boatswain's mate blush.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 23 June 1955, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directions is for information and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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The Bureau invites requests for additional copies as necessary to comply with the basic directive. This magazine is intended for all hands and commanding officers should take necessary steps to make it available accordingly.

The Bureau should be kept informed of changes in the number of copies required.

The Bureau should also be advised if the full number of copies is not received regularly.

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• AT RIGHT: HIGH BOW — Deck gang of USS *Worcester* (CL 144) tend to their charge high above pier level while moored at Long Beach Naval Ship Yard.

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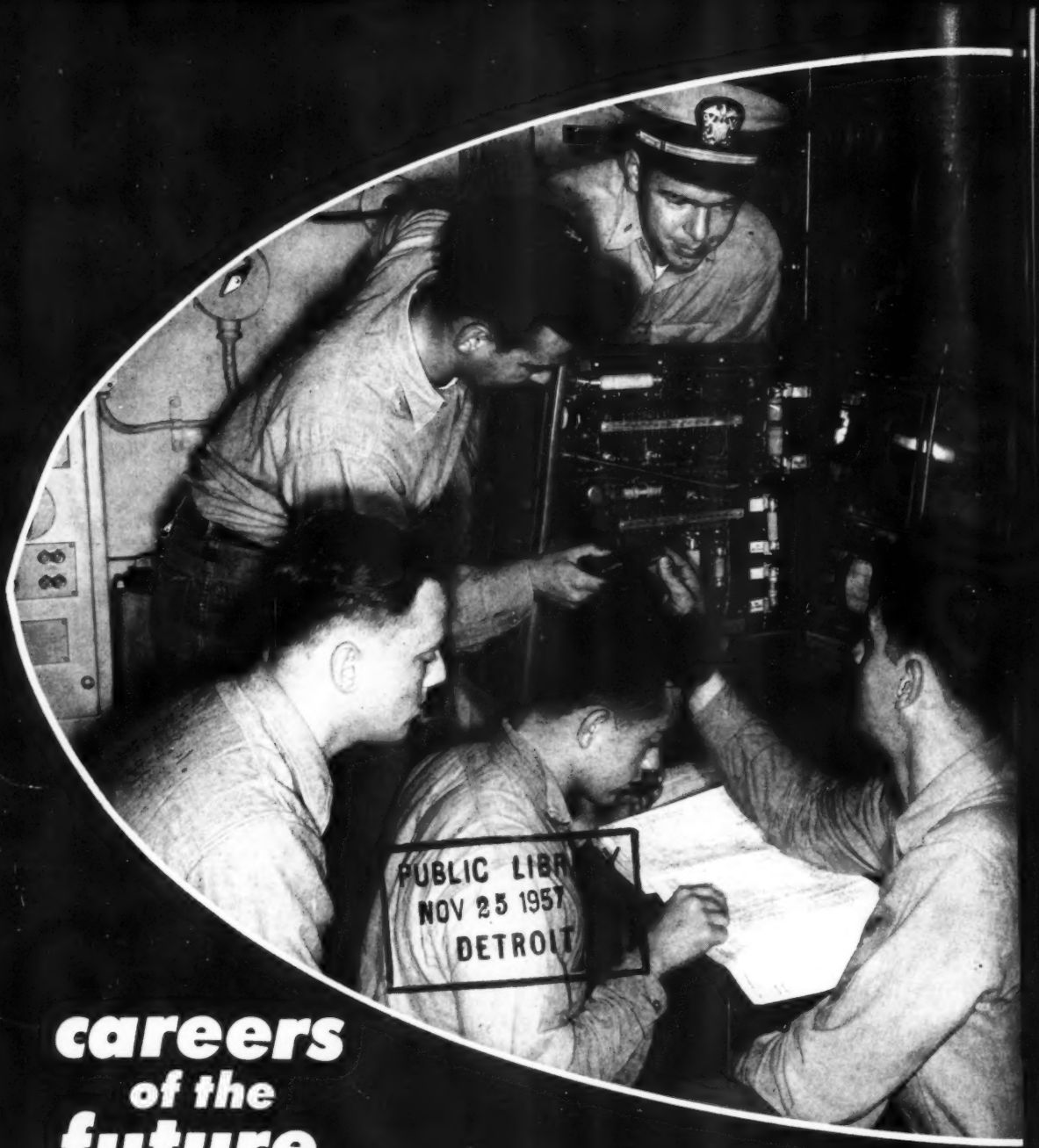

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